The University *of* Western Ontario
BIOLOGICAL AGENTS REGISTRY FORM
Approved Biohazards Subcommittee: October 14, 2011
Biosafety Website: www.uwo.ca/humanresources/biosafety/

This form must be completed by each Principal Investigator holding a grant administered by the University of Western Ontario (UWO) or in charge of a laboratory/facility where the use of Level 1, 2 or 3 biological agents is described in the laboratory or animal work proposed. The form must also be completed if any work is proposed involving animals carrying zoonotic agents infectious to humans or involving plants, fungi, or insects that require Public Health Agency of Canada (PHAC) or Canadian Food Inspection Agency (CFIA) permits.

This form must be updated at least every 3 years or when there are changes to the biological agents being used.

Containment Levels will be established in accordance with Laboratory Biosafety Guidelines, 3rd edition, 2004, Public Health Agency of Canada (PHAC) or Containment Standards for Veterinary Facilities, 1st edition 1996, Canadian Food Inspection Agency (CFIA).

Electronically completed forms are to be submitted to Occupational Health and Safety, (OHS), (Support Services Building, Room 4190 or to jstanle2@uwo.ca) for distribution to the Biohazards Subcommittee. For questions regarding this form, please contact the Biosafety Officer at extension 81135 or biosafety@uwo.ca. If there are changes to the information on this form (excluding grant title and funding agencies), contact Occupational Health and Safety for a modification form. See website: www.uwo.ca/humanresources/biosafety.

Please ensure that all questions are fully and clearly answered. Failure to do so will lead to the form being returned, which will cause delays in your approval and frustration for you and your colleagues on the Committee.

If you are re-submitting this form as requested by the Biohazards Subcommittee, please make modifications to the form in bold print, highlighted in yellow. Please re-submit forms electronically.

PRINCIPAL INVESTIGATOR:	**John Di Guglielmo**
DEPARTMENT:	**Physiology and Pharmacology**
ADDRESS:	**Western University, Medical Sciences Building**
PHONE NUMBER:	**80042**
EMERGENCY PHONE NUMBER(S):	**(519) 642-2858**
EMAIL:	**john.diguglielmo@schulich.uwo.ca**

Location of experimental work to be carried out :

Building :	**MSB**	Room(s):	**222**
Building :	**MSB**	Room(s):	**225**
Building :	**MSB**	Room(s):	**235, 235A**

***For work being performed at Institutions affiliated with the University of Western Ontario, the Safety Officer for the Institution where experiments will take place must sign the form prior to its being sent to the University of Western Ontario Biosafety Officer (See Section 15.0, Approvals).**

FUNDING AGENCY/AGENCIES: **NSERC/ CIHR**
GRANT TITLE(S):
UNDERGRADUATE COURSE NAME(IF APPLICABLE):

List all personnel working under Principal Investigators supervision in this location:

Name	UWO E-mail Address	Date of Biosafety Training
Ciric To	**cto9@uwo.ca**	**2006/11/03**
Sarah McLean	**smclea25@uwo.ca**	**2011/08/25**
Adrian Gunaratne	**agunarat@uwo.ca**	**2010/11/02**
Boun Thai	**boun.thai@schulich.uwo.ca**	**2006/05/11**
Eddie Chan	**echan97@uwo.ca**	**2012/07/16**

Please explain how the biological agents are used in your project and how they are stored and disposed of. The BARF without this description will not be reviewed.

E. coli (strain DH5alpha): The bacteria will be obtained from commercial sources and stored at -80°C in 20-50 µL aliquots. To amplify plasmid cDNA, the bacteria will be transformed with cDNA constructs (please see below) and grown in LB broth containing ampicillin or kanamycin. To harvest, the bacteria will be centrifuged and then the plasmid will be isolated by lysing the bacteria followed by Qiagen midi-prep column filtration (using commercially available kits). The purified plasmid will be stored in water at -20°C. Every other liquid and plastic ware that comes into contact with the bacteria will be treated with bleach (5% sodium hypochlorite) and disposed of as per instructions from Western's Biosafety Office.

cDNA constructs: The cDNA constructs contain ampicillin or kanamycin resistance gene cassettes that will allow them to be amplified as described above. They will then be transfected into cultured cells using standard sodium carbonate or lipofectamine protocols.

Cultured cells: The level 2 cultured cells will be obtained from the ATCC (through Cedarlane). They will be of human, rat, mouse, monkey, dog or mink origin and will stored in liquid nitrogen. Once thawed, they will be grown at 37°C and transfected with cDNA constructs. The cells will be harvested by lysis using detergents and processed for immunoprecipitation, western blotting or immunofluorescence microscopy. Surfaces, plastic ware and liquids that come into contact with cells will be either cleaned with 70% ethanol, bleach or autoclaved.

Please include a ONE page research summary or teaching protocol in lay terms.
Forms with summaries more than one page will not be reviewed.

Transforming growth factor-beta (TGFß) is a cytokine that normally acts as a tumor suppressor. However, in lung tumors it switches roles and stimulates tumor metastasis. We will investigate the regulation of this switch and how TGFß signals are regulated in lung cell tumors. TGFß associates with cell surface receptors, which internalize rapidly into the cell body. The interaction of these activated receptors with different molecules in their cellular travels will affect signaling outcome. In this study we propose to analyze a novel aspect of TGFß regulation; the relationship between TGFß receptor traffic and signal transduction. We propose to analyze how proteins that associate with the receptors alter TGFß receptor traffic and signaling. These proteins will then be tested for their TGFß-dependent metastatic potential of lung cancer cells. This will be tested by analyzing lung cancer cell growth, migration and invasion in cell culture models. This research will identify molecules that will be eventually used as therapeutic targets in lung cancer patients.

1.0 Microorganisms

1.1 Does your work involve the use of biological agents? ☒ YES ☐ NO
(non-pathogenic and pathogenic biological agents including but not limited to bacteria and other microorganisms, viruses, prions, parasites or pathogens of plant or animal origin)? If no, please proceed to Section 2.0

Do you use microorganisms that require a permit from the CFIA? ☐ YES ☒ NO
If YES, please give the name of the species ______
What is the origin of the microorganism(s)? **E. Coli, strain: DH5alpha**

Please describe the risk (if any) of escape and how this will be mitigated:
No risk. Bleach or 70% Ethanol will be used to eliminate E. Coli on surfaces or flasks

Please attach the CFIA permit.

Please describe any CFIA permit conditions:
N/A

1.2 Please complete the table below:

Full Scientific Name of Biological Agent(s)* (Be specific)	Is it known to be a human pathogen? YES/NO	Is it known to be an animal pathogen? YES/NO	Is it known to be a zoonotic agent? YES/NO	Maximum quantity to be cultured at one time? (in Litres)	Source/ Supplier	PHAC or CFIA Containment Level
E. Coli DH5alpha	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	**1**		☒ 1 ☐ 2 ☐ 2+ ☐ 3
	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No			☐ 1 ☐ 2 ☐ 2+ ☐ 3
	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No			☐ 1 ☐ 2 ☐ 2+ ☐ 3
	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No			☐ 1 ☐ 2 ☐ 2+ ☐ 3
	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No			☐ 1 ☐ 2 ☐ 2+ ☐ 3
	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No			☐ 1 ☐ 2 ☐ 2+ ☐ 3
	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No			☐ 1 ☐ 2 ☐ 2+ ☐ 3
	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No			☐ 1 ☐ 2 ☐ 2+ ☐ 3

****Please attach a Material Safety Data Sheet or equivalent from the supplier if the bacterium used is not on this link:***
http://www.uwo.ca/humanresources/docandform/docs/ohs/CFIA_Ecoli_list.pdf

Additional Comments: ______

2.0 Cell Culture

2.1 Does your work involve the use of cell cultures? ☒ YES ☐ NO
(If NO, please proceed to Section 3.0)

2.2 Please indicate the type of primary cells (i.e. derived from fresh tissue) that will be grown in culture:

Cell Type	Is this cell type used in your work?	Source of Primary Cell Culture Tissue	AUS Protocol Number
Human	☒ Yes ☐ No	**Established cell lines**	Not applicable
Rodent	☒ Yes ☐ No	**Established cell lines**	
Non-human primate	☒ Yes ☐ No	**Established cell lines**	
Other (specify)	☒ Yes ☐ No	**Established cell lines**	

2.3 Please indicate the type of established cells that will be grown in culture in:

Cell Type	Is this cell type used in your work?	Specific cell line(s)*	Containment Level of each cell line	Supplier / Source of cell line(s)
Human	☒ Yes ☐ No	**HEK293, HEK293T, Hela, A549, H1299**	**2**	**ATCC**
Rodent	☒ Yes ☐ No	**Rat2, C2C12, Mv1Lu, NIH-3T3**	**2**	**ATCC**
Non-human primate	☒ Yes ☐ No	**Cos1, Cos7**	**2**	**ATCC**
Other (specify)	☒ Yes ☐ No	**MDCK**	**2**	**ATCC**

**Please attach a Material Safety Data Sheet or equivalent from the supplier. (For more information, see www.atcc.org)*

2.4 For above named cell t... quired ☐ 1 ☐ 2 ☐ 2+ ☐ 3

level 2

Additional Comments: _____

3.0 Use of Human Source Materials

3.1 Does your work involve the use of human source materials? ☐ YES ☒ NO
If no, please proceed to Section 4.0

3.2 Indicate in the table below the Human Source Material to be used.

Human Source Material	**Source/Supplier /Company Name**	**Is Human Source Material Infected With An Infectious Agent? YES/UNKNOWN**	**Name of Infectious Agent (If applicable)**	**PHAC or CFIA Containment Level (Select one)**
Human Blood (whole) or other Body Fluid		☐ Yes ☐ Unknown		☐1 ☐2 ☐2+ ☐3
Human Blood (fraction) or other Body Fluid		☐ Yes ☐ Unknown		☐1 ☐2 ☐2+ ☐3
Human Organs or Tissues (unpreserved)		☐ Yes ☐ Unknown		☐1 ☐2 ☐2+ ☐3
Human Organs or Tissues (preserved)		Not Applicable		Not Applicable

Additional Comments: _____

4.0 Genetically Modified Organisms and Cell lines

4.1 Will genetic modifications be made to the microorganisms, biological agents, or cells described in Sections 1.0 and 2.0? ☒ YES ☐ NO If **NO**, please proceed to Section 5.0

4.2 Will genetic modification(s) involving plasmids be done? ☐ YES, complete table below ☐ NO

Bacteria Used for Cloning *	Plasmid(s) **	Source of Plasmid	Gene Transformed or Transfected	Will there be a change due to transformation of the bacteria?	Will there be a change in the pathogenicity of the bacteria after the genetic modification?	What are the consequences due to the transformation of the bacteria?
DH5alpha	**pCMV5 pIRES2-GFP**	**J. Wrana (U of T), Clontech, Addgene**	**Par6, Par3b, paxillin, BirA**	**no**	**no**	**none**

**** Please attach a Material Safety Data Sheet or equivalent if available.***
***** Please attach a plasmid map.***
******No Material Safety Data Sheet is required for the following strains of E. coli:***
http://www.uwo.ca/humanresources/docandform/docs/ohs/CFIA_Ecoli_list.pdf

4.3 Will genetic modification(s) of bacteria and/or cells involving viral vectors be made?
☐ YES, complete table below ☒ NO

Virus Used for Vector Construction	Vector(s) *	Source of Vector	Gene(s) Transduced	Describe the change that results from transduction

**** Please attach a Material Safety Data Sheet or equivalent.***

4.3.1 Will virus be replication defective? ☐ YES ☐ NO

4.3.2 Will virus be infectious to humans or animals? ☐ YES ☐ NO

4.3.3 Will this be expected to increase the containment level required? ☐ YES ☐ NO

5.0 Will genetic sequences from the following be involved?

- HIV ☒ NO ☐ YES, specify
- HTLV 1 or 2 or genes from any Level 1 or Level 2 pathogens ☐ NO ☐ YES, specify
- SV 40 Large T antigen ☒ NO ☐ YES
- E1A oncogene ☒ NO ☐ YES
- Known oncogenes ☒ NO ☐ YES, specify
- Other human or animal pathogen and or their toxins ☒ NO ☐ YES, specify

5.1 Is any work being conducted with prions or prion sequences? ☒ NO ☐ YES

Additional Comments: _____

No response

6.0 Human Gene Therapy Trials

6.1 Will human clinical trials be conducted involving a biological agent? ☐ YES ☒ NO
(including but not limited to microorganisms, viruses, prions, parasites or pathogens of plant or animal origin)
If no, please proceed to Section 7.0

6.2 If YES, please specify which biological agent will be used:
Please attach a full description of the biological agent.

6.3 Will the biological agent be able to replicate in the host? ☐ YES ☐ NO

6.4 How will the biological agent be administered?

6.5 Please give the Health Care Facility where the clinical trial will be conducted:

6.6 Has human ethics approval been obtained? ☐ YES, number: ☐ NO ☐ PENDING

7.0 Animal Experiments

7.1 Will live animals be used? ☐ YES ☒ NO If **NO**, please proceed to section 8.0

7.2 Name of animal species to be used

7.3 AUS protocol #

7.4 List the location(s) for the animal experimentation and housing.

7.5 Will any of the agents listed in section 4.0 be used in live animals
☐ NO ☐ YES, specify:

7.6 Will the agent(s) be shed by the animal:
☐ YES ☐ NO, please justify:

8.0 Use of Animal species with Zoonotic Hazards

8.1 Will any animals with zoonotic hazards or their organs, tissues, lavages or other body fluids including blood be used (see list below)? ☐ YES ☒ NO - If **NO**, please proceed to section 9.0

8.2 Will live animals be used? ☐ YES ☐ NO

8.3 If **YES**, please specify the animal(s) used:

- Pound source dogs ☐ YES ☐ NO
- Pound source cats ☐ YES ☐ NO
- Cattle, sheep or goats ☐ YES, species ☐ NO
- Non-human primates ☐ YES, species ☐ NO
- Wild caught animals ☐ YES, species & colony # ☐ NO
- Birds ☐ YES, species ☐ NO
- Others (wild or domestic) ☐ YES, specify ☐ NO

8.4 If no live animals are used, please specify the source of the specimens:

9.0 Biological Toxins and Hormones

9.1 Will toxins or hormones of biological origin be used? ☐ YES ☒ NO If **NO**, please proceed to Section 10.0

9.2 If YES, please name the toxin(s) or hormones(s)
Please attach information, such as a Material Safety Data Sheet, for the toxin(s) used.

9.3 What is the LD_{50} (specify species) of the toxin or hormone

9.4 How much of the toxin or hormone is handled at one time*?

9.5 How much of the toxin or hormone is stored*?

9.6 Will any biological toxins or hormones be used in live animals? ☐ YES ☐ NO
If **YES**, Please provide details:

*For information on biosecurity requirements, please see:
http://www.uwo.ca/humanresources/docandform/docs/healthandsafety/biosafety/Biosecurity_Requirements.pdf

Additional Comments: _____

10.0 Insects

10.1 Do you use insects? ☐ YES ☒ NO - If **NO**, please proceed to Section 11.0

10.2 If YES, please give the name of the species.

10.3 What is the origin of the insect?

10.4 What is the life stage of the insect?

10.5 What is your intention? ☐ Initiate and maintain colony, give location:
☐ "One-time" use, give location:

10.6 Please describe the risk (if any) of escape and how this will be mitigated:

10.7 Do you use insects that require a permit from the CFIA permit? ☐ YES ☐ NO
If **YES**, Please attach the CFIA permit & describe any CFIA permit conditions:

11.0 Plants

11.1 Do you use plants? ☐ YES ☒ NO - If **NO**, please proceed to Section 12.0

11.2 If YES, please give the name of the species.

11.3 What is the origin of the plant?

11.4 What is the form of the plant (seed, seedling, plant, tree...)?

11.5 What is your intention? ☐ Grow and maintain a crop ☐ "One-time" use

11.6 Do you do any modifications to the plant? ☐ YES ☐ NO
If yes, please describe:

11.7 Please describe the risk (if any) of loss of the material from the lab and how this will be mitigated:

11.8 Is the CFIA permit attached? ☐ YES ☐ NO
If **YES**, Please attach the CFIA permit & describe any CFIA permit conditions:

12.0 Import Requirements

12.1 Will any of the above agents be imported? ☐ YES, country of origin ☒ NO
If **NO**, please proceed to Section 13.0

12.2 Has an Import Permit been obtained from HC for human pathogens? ☐ YES ☐ NO

12.3 Has an import permit been obtained from CFIA for animal or plant pathogens? ☐ YES ☐ NO

12.4 Has the import permit been sent to OHS? ☐ YES, please provide permit # ☐ NO

13.0 Training Requirements for Personnel Named on Form

All personnel named on the above form who will be using any of the above named agents are required to attend the following training courses given by OHS:

- Biosafety
- Laboratory and Environmental/Waste Management Safety
- WHMIS (Western or equivalent)
- Employee Health and Safety Orientation

As the Principal Investigator, I have ensured that all of the personnel named on the form who will be using any of the biological agents in Sections 1.0 to 9.0 have been trained.

An X in the check box indicates you agree with the above statement... ☒
Enter Your Name John Di Guglielmo ***Date:*** Aug. 22, 2012

14.0 Containment Levels

14.1 For the work described in sections 1.0 to 9.0, please indicate the highest HC or CFIA Containment Level required. ☐ 1 ☒ 2 ☐ 2+ ☐ 3

14.2 Has the facility been certified by OHS for this level of containment?
☒ YES, location and date of most recent biosafety inspection: **7/17/2011**
☐ NO, please certify
☐ NOT REQUIRED for Level 1 containment

14.3 Please indicate permit number (not applicable for first time applicants): **BIO-UWO-0148**

15.0 Procedures to be Followed

15.1 Are additional risk reduction measures necessary beyond containment level 1, 2, 2+ or 3 measures that are unique to these agents? ☐ YES ☒ NO
If **YES** please describe:

15.2 Please outline what will be done if there is an exposure to the biological agents listed such as a needlestick injury or an accidental splash:
All injuries will be reported to the safety officer and treated as described in the laboratory safety manual. In case of a needlestick or cut, the wound will be washed with soap and water. If mucous (eyes, nose, mouth) membranes will be flushed with water at the nearest faucet or eye wash. The worker will immediately inform the Supervisor/Principal Investigator of the exposure incident.

15.3 As the Principal Investigator, I will ensure that this project will follow the Western Biosafety Guidelines and Procedures Manual for Containment Level 1 & 2 Laboratories (and the Level 3 Facilities Manual for Level 3 projects). I will ensure that UWO faculty, staff and students working in my laboratory have an up-to-date Hazard Communication Form, found at http://www.shs.uwo.ca/workplace/workplacehealth.html

An X in the check box indicates you agree with the above statement... ☒
Enter Your Name **John Di Guglielmo** ***Date:*** **Aug. 22, 2012**

15.4 Additional Comments: _____

16.0 Approvals

1) UWO Biohazards Subcommittee:
SIGNATURE: _____
Date: _____

2) Safety Officer for the University of Western Ontario
SIGNATURE: _____
Date: _____

3) Safety Officer for Institution where experiments will take place (if not UWO):
SIGNATURE: _____
Date: _____

Approval Number: _____ Expiry Date (3 years from Approval): _____

Canadian Food Inspection Agency | Agence canadienne d'inspection des aliments

Office of Biohazard Containment and Safety
Science Branch, CFIA
59 Camelot Drive, Ottawa, Ontario K1A 0Y9
Tel: (613) 221-7068 Fax: (613) 228-6129
Email: ImportZoopath@inspection.gc.ca

Bureau du confinement des biorisques et sécurité
Direction générale des sciences, ACIA
59 promenade Camelot, Ottawa, Ontario K1A 0Y9
Tél: (613) 221-7068 Téléc: (613) 228-6129
Courriel: ImportZoopath@inspection.gc.ca

October 20th, 2009

Ms. Shamila Survery / Mr. Michael Decosimo
Cedarlane Laboratories Ltd
4410 Paletta Court
Burlington, Ontario L7L 5R2

By Facsimile: (289) 288-0020

E. coli

SUBJECT: Importation of *Escherichia coli* strains

Dear Ms. Survery / Mr. Decosimo:

Our office received your query about the importation of *Escherichia coli* from the American Type Culture Collection (ATCC) located in Manassas, Virginia, United States. The following *Escherichia coli* strains are consider to be level 1 animal pathogens:

- 5K
- 58
- 58-161
- 679
- 1532
- AB284
- AB311
- AB1157
- AB1206
- AG1
- B
- BB4
- BD792
- BL21
- BL21 (DE3)
- BM25.8
- C
- C-1a
- C-3000
- C25
- C41 (DE3)
- C43 (DE3)
- C600
- Cavalli Hfr
- CIE85
- DH1
- DH10 GOLD
- DH10B
- DH5
- DH5-alpha
- DP50
- DY145
- DY380
- E11
- EJ183
- EL250
- EMG2
- EPI 300
- EZ10
- FDA Seattle 1946
- Fusion-Blue
- H1443
- HF4714
- HB101
- HS(PFAMP)R
- Hfr3000
- Hfr3000 X74
- HMS174
- J52
- J53
- JC3272
- JC7661
- JC9387
- JF1504
- JF1508
- JF1509
- JJ055
- JM83
- JM101
- JM109
- K12
- KC8
- KA802
- KAM32
- KAM33
- KAM43
- LE450
- LE451
- LE452
- MB408
- MBX1928
- MC1061
- MC4100 (MuLac)
- MG1655
- MM294
- MS101
- NC-7
- Nissle 1917
- One Shot STBL3
- OP50
- P678
- PA309
- PK-5
- PMC103
- PR13
- Rri
- RV308
- S17-1λ -PIR
- SCS1
- SMR10
- SOLR
- SuperchargeEZ10
- SURE
- TOP10
- TG1
- U5/41
- W208
- W945
- W1485
- W3104
- W3110
- WA704
- WP2
- X1854
- X2160T
- X2541
- X2547T
- XL1-BLUE
- XL1-BLUE-MRF
- XLOLR
- Y10
- Y1090 (1090)
- YN2980
- W3110
- WG1
- WG439
- WG443
- WG445

The Office of Biohazard Containment and Safety (BCS) of the Canadian Food Inspection Agency (CFIA) only issues import permits for microorganisms that are pathogenic to animals, or parts of microorganisms that are pathogenic to animals. As the products listed above are not considered pathogenic to animals, the Office of BCS does not have any regulatory requirements for their importation.

Please note that other legislation may apply. You may wish to contact the Public Health Agency of Canada's (PHAC) Office of Laboratory Security at (613) 957-1779.

Note: Microorganisms pathogenic to animals and veterinary biologics require an import permit from the CFIA.

Sincerely,

Cinthia Labrie
Head, Animal Pathogen Importation Program
Office of Biohazard Containment & Safety

Canada

Info on Cell Line(s)

Cell Biology

ATCC® Number: **CRL-1573™** Order this Item

Price: **price)** **Log In with customer # to see your price**

See New Benefits of ATCC Culture

Designations:	293 [HEK-293]
Depositors:	FL Graham
Biosafety Level:	2 [CELLS CONTAIN ADENOVIRUS]
Shipped:	frozen
Medium & Serum:	See Propagation
Growth Properties:	adherent
Organism:	*Homo sapiens*
Morphology:	epithelial 
Source:	**Organ:** embryonic kidney
Permits/Forms:	In addition to the MTA mentioned above, other ATCC and/or regulatory permits may be required for the transfer of this ATCC material. Anyone purchasing ATCC material is ultimately responsible for obtaining the permits. Please click here for information regarding the specific requirements for shipment to your location.
Restrictions:	These cells are distributed for research purposes only. 293 cells, their products, or their derivatives may not be distributed to third parties.
Applications:	efficacy testing transfection host viruscide testing
Receptors:	vitronectin, expressed
Tumorigenic:	YES

Related Links ▸

NCBI Entrez Search

Cell Micrograph

Make a Deposit

Frequently Asked Questions

Material Transfer Agreement New!

Technical Support

Related Cell Culture Products

Product Information Sheet

BioProducts

- Cell, microbial and molecular genomics products for the life sciences

BioServices

- Bio-materials management; basic repository to complex partnership-level services

BioStandards

- Biological Reference Material and Consensus Standards for the life science community

DNA Profile (STR):

Amelogenin: X
CSF1PO: 11,12
D13S317: 12,14
D16S539: 9,13
D5S818: 8,9
D7S820: 11,12
THO1: 7,9.3
TPOX: 11

Cell Biology

ATCC® Number:	**CRL-11268™** Order this Item	Price:	**$431.00 (for-profit list price)** **$359.17 (non-profit list price)** **Log In with customer # to see your price**

See New Benefits of ATCC Culture

Designations:	293T/17 [HEK 293T/17]
Depositors:	Rockefeller Univ.
Biosafety Level:	2 [Cells contain Adeno and SV-40 viral DNA sequences]
Shipped:	frozen
Medium & Serum:	See Propagation
Growth Properties:	adherent
Organism:	*Homo sapiens* deposited as human
Morphology:	epithelial
Source:	**Organ:** kidney
Permits/Forms:	In addition to the MTA mentioned above, other ATCC and/or regulatory permits may be required for the transfer of this ATCC material. Anyone purchasing ATCC material is ultimately responsible for obtaining the permits. Please click here for information regarding the specific requirements for shipment to your location.
Restrictions:	The line is available with the following restriction: 1. The cell line was deposited at the ATCC by Rockefeller University and is provided for research purposes only. Neither the cell line nor the products derived from it may be sold or used for commercial purposes. Nor can the cells be distributed to third parties for purposes of sale, or producing for sale, cells or their products. The cells are provided as a service to the research community. They are provided without warranty of merchantability or fitness for a particular purpose or any other warranty, expressed or implied. 2. Any proposed commercial use of the cells, or their products, must first be negotiated with Rockefeller University, Office of Technology Transfer, 1230 York Avenue, New York, NY 10065 Attn: Kathleen A. Denis, Associate Vice President Technology Transfer.

Related Links ▸

NCBI Entrez Search
Make a Deposit
Frequently Asked Questions
Material Transfer Agreement New!
Technical Support
Related Cell Culture Products
Product Information Sheet

Applications:	293T cells were cloned and the clones tested with the pBND and pZAP vectors to obtain a line capable of producing high titers of infectious retrovirus, 293T/17. These cells constitutively express the simian virus 40 (SV40) large T antigen, and clone 17 was selected specifically for its high transfectability.
Antigen Expression:	SV40 T antigen [45408] Amelogenin: X

Cell Biology

ATCC® Number:	**CCL-2™**	Order this Item	Price:	**$431.00 (for-profit list price)** **$359.17 (non-profit list price)** **Log In with customer # to see your price**

See New Benefits of ATCC Culture

Designations:	HeLa
Depositors:	WF Scherer
Biosafety Level:	2 [Cells contain human papilloma virus]
Shipped:	frozen
Medium & Serum:	See Propagation
Growth Properties:	adherent
Organism:	*Homo sapiens*
Morphology:	epithelial 
Source:	**Organ:** cervix **Disease:** adenocarcinoma **Cell Type:** epithelial
Permits/Forms:	In addition to the MTA mentioned above, other ATCC and/or regulatory permits may be required for the transfer of this ATCC material. Anyone purchasing ATCC material is ultimately responsible for obtaining the permits. Please click here for information regarding the specific requirements for shipment to your location.
Applications:	transfection host screening for Escherichia coli strains with invasive potential
Virus Susceptibility:	Human adenovirus 3 Encephalomyocarditis virus Human poliovirus 1 Human poliovirus 2 Human poliovirus 3
DNA Profile (STR):	Amelogenin: X CSF1PO: 9,10 D13S317: 12,13.3 D16S539: 9,10 D5S818: 11,12 D7S820: 8,12 THO1: 7 TPOX: 8,12

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ATCC® Number:	**CCL-185™**	Order this Item	Price:	**$431.00 (for-profit list price)** **$359.17 (non-profit list price)** **Log In with customer # to see your price**

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Designations:	A549
Depositors:	M Lieber
Biosafety Level:	1
Shipped:	frozen
Medium & Serum:	See Propagation
Growth Properties:	adherent
Organism:	*Homo sapiens*
Morphology:	epithelial 
Source:	**Organ:** lung **Disease:** carcinoma
Permits/Forms:	In addition to the MTA mentioned above, other ATCC and/or regulatory permits may be required for the transfer of this ATCC material. Anyone purchasing ATCC material is ultimately responsible for obtaining the permits. Please click here for information regarding the specific requirements for shipment to your location.
Isolation:	**Isolation date:** 1972
Applications:	transfection host
DNA Profile (STR):	Amelogenin: X,Y CSF1PO: 10,12 D13S317: 11 D16S539: 11,12 D5S818: 11 D7S820: 8,11 THO1: 8,9.3 TPOX: 8,11 vWA: 14
Cytogenetic Analysis:	This is a hypotriploid human cell line with the modal chromosome number of 66, occurring in 24% of cells. Cells with 64 (22%), 65, and 67 chromosome counts also occurred at relatively high frequencies; the rate with higher ploidies was low at 0.4%. There were 6 markers present in single copies in all cells. They include der(6)t(1;6) (q11;q27); ?del(6) (p23); del(11) (q21), del(2) (q11), M4 and M5. Most cells had two X and two Y chromosomes. However, one or both Y chromosomes were lost in 40% of 50 cells

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ATCC® Number:	**CRL-5803™** Order this Item	Price:	**$431.00 (for-profit list price)** **$359.17 (non-profit list price)** **Log In with customer # to see your price**

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Designations:	NCI-H1299
Depositors:	AF Gazdar, JD Minna
Biosafety Level:	1
Shipped:	frozen
Medium & Serum:	See Propagation
Growth Properties:	adherent
Organism:	*Homo sapiens*
Morphology:	epithelial
Source:	**Organ:** lung **Disease:** carcinoma; non-small cell lung cancer **Derived from metastatic site:** lymph node
Cellular Products:	neuromedin B
Permits/Forms:	In addition to the MTA mentioned above, other ATCC and/or regulatory permits may be required for the transfer of this ATCC material. Anyone purchasing ATCC material is ultimately responsible for obtaining the permits. Please click here for information regarding the specific requirements for shipment to your location.
Restrictions:	The line is available with the following restrictions: 1. This cell line was deposited at the ATCC by Dr. A. Gazdar and Dr. J. Minna and is provided for research purposes only. Neither the cell line nor products derived from it may be sold or used for commercial purposes. Nor can the cells be distributed to third parties for purposes of sale, or producing for sale, cells or their products. The cells are provided as service to the research community. They are provided without warranty of merchantability or fitness for a particular purpose or any other warranty, expressed or implied. 2. Any proposed commercial use of the these cells, or their products must first be negotiated with the University of Texas Southwestern Medical Center at Dallas, 5323 Harry Hines Blvd., Dallas, Texas 75235. Telephone (214) 699-8056, FAX (214) 688-7233.
Applications:	transfection host
DNA Profile (STR):	Amelogenin:X CSF1PO:12 D13S317:12 D16S539:12,13 D5S818:11 D7S820:10 THO1:6,9.3

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Cancer cell line mutation data

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ATCC® Number:	**CRL-1764™** Order this Item	Price:	**$431.00 (for-profit list price)** **$359.17 (non-profit list price)** **Log In with customer # to see your price**

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Designations:	Rat2
Depositors:	B Ahrens
Biosafety Level:	1
Shipped:	frozen
Medium & Serum:	See Propagation
Growth Properties:	adherent
Organism:	*Rattus norvegicus* deposited as *Rattus* sp.
Morphology:	fibroblast
Source:	**Disease:** normal **Strain:** Fischer
Permits/Forms:	In addition to the MTA mentioned above, other ATCC and/or regulatory permits may be required for the transfer of this ATCC material. Anyone purchasing ATCC material is ultimately responsible for obtaining the permits. Please click here for information regarding the specific requirements for shipment to your location.
Applications:	Rat2 lacks detectable nuclear thymidine kinase, is highly transfectable by exogenous DNA and is phenotypically normal.
Age:	embryo; fetus
Comments:	This line was derived from the a 5-bromo-2'-deoxyuridine resistant strain of the Fischer rat fibroblast 3T3 like cell line, Rat1 (developed by W.C. Topp). Rat2 lacks detectable nuclear thymidine kinase, is highly transfectable by exogenous DNA and is phenotypically normal.
Propagation:	**ATCC complete growth medium:** The base medium for this cell line is ATCC-formulated Dulbecco's Modified Eagle's Medium, Catalog No. 30-2002. To make the complete growth medium, add the following components to the base medium: fetal bovine serum to a final concentration of 10%. **Temperature:** 37.0°C
Subculturing:	**Subcultivation Ratio:** A subcultivation ratio of 1:2 to 1:6 is recommended **Medium Renewal:** Twice per week Remove medium, and rinse with 0.25% trypsin, 0.03% EDTA solution. Remove the solution and add an additional 1 to 2 ml of trypsin-EDTA solution. Allow the flask to sit at room temperature (or at 37C) until the cells detach. Add fresh culture medium, aspirate and dispense into new culture

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ATCC® Number:	**CRL-1772™** Order this Item	Price:	**$431.00 (for-profit list price)** **$359.17 (non-profit list price)** **Log In with customer # to see your price**

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Designations:	C2C12
Biosafety Level:	1
Shipped:	frozen
Medium & Serum:	See Propagation
Growth Properties:	adherent
Organism:	*Mus musculus*
Morphology:	myoblast 
Source:	**Strain:** C3H **Tissue:** muscle **Cell Type:** myoblast;
Permits/Forms:	In addition to the MTA mentioned above, other ATCC and/or regulatory permits may be required for the transfer of this ATCC material. Anyone purchasing ATCC material is ultimately responsible for obtaining the permits. Please click here for information regarding the specific requirements for shipment to your location.
Applications:	transfection host
Comments:	This is a subclone (produced by H. Blau, et al) of the mouse myoblast cell line established by D. Yaffe and O. Saxel. The C2C12 cell line differentiates rapidly, forming contractile myotubes and producing characteristic muscle proteins. Treatment with bone morphogenic protein 2 (BMP-2) cause a shift in the differentiation pathway from myoblastic to osteoblastic. Tested and found negative for ectromelia virus (mousepox).
Propagation:	**ATCC complete growth medium:** The base medium for this cell line is ATCC-formulated Dulbecco's Modified Eagle's Medium, Catalog No. 30-2002. To make the complete growth medium, add the following components to the base medium: fetal bovine serum to a final concentration of 10%. **Temperature:** 37.0°C **Protocol:** IMPORTANT - DO NOT ALLOW CULTURES TO BECOME CONFLUENT. Cultures must not be allowed to become confluent as this will deplete the myoblastic population in the culture. Myotube formation is enhanced when the medium is supplemented with 10% horse serum instead of fetal bovine serum. 1. Remove and discard culture medium.

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ATCC® Number:	**CCL-64™** Order this Item	Price:	**$431.00 (for-profit list price)** **$359.17 (non-profit list price)** **Log In with customer # to see your price**

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Designations:	Mv 1 Lu (NBL-7)
Depositors:	AJ Kniazeff
Biosafety Level:	1
Shipped:	frozen
Medium & Serum:	See Propagation
Growth Properties:	adherent
Organism:	*Neovison vison*
Morphology:	epithelial
Source:	**Organ:** lung
Permits/Forms:	In addition to the MTA mentioned above, other ATCC and/or regulatory permits may be required for the transfer of this ATCC material. Anyone purchasing ATCC material is ultimately responsible for obtaining the permits. Please click here for information regarding the specific requirements for shipment to your location.
Isolation:	**Isolation date:** May, 1964
Applications:	transfection host
Virus Resistance:	adenovirus 5; coxsackievirus A9, B5; poliovirus 2
Cytogenetic Analysis:	Both male and female diploid cells as well as pseudodiploid cells are present. Approximately 58% of the cells have a chromosome number within + or - 1 of the diploid and one dicentric chromosome is present in some cells of the population., Both male and female diploid cells as well as pseudodiploid cells are present. Approximately 58% of the cells have a chromosome number within + or - 1 of the diploid and one dicentric chromosome is present in some cells of the population.
Age:	near term fetus
Gender:	male and female mixed

Comments: The Mv 1 Lu (NBL-7) cell line was initiated by A.J. Kniazeff, W.A. Nelson-Rees and N.B. Darby, Jr., in May, 1964, from trypsinized lungs of several nearly full-term, unsexed fetuses of the Aleutian mink. The cells are useful for focus forming assays for murine and feline sarcoma viruses [PubMed: 4366800].

ATCC complete growth medium: The base medium for this cell line is ATCC-formulated Eagle's Minimum Essential Medium, Catalog No. 30-2003. To make the complete growth medium, add

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ATCC® Number:	**CRL-1658™** Order this Item	Price:	**$431.00 (for-profit list price)** **$359.17 (non-profit list price)** **Log In with customer # to see your price**

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Designations:	NIH/3T3
Biosafety Level:	1
Shipped:	frozen
Medium & Serum:	See Propagation
Growth Properties:	adherent
Organism:	*Mus musculus*
Morphology:	fibroblast 
Source:	**Organ:** embryo **Strain:** NIH/Swiss **Cell Type:** fibroblast
Permits/Forms:	In addition to the MTA mentioned above, other ATCC and/or regulatory permits may be required for the transfer of this ATCC material. Anyone purchasing ATCC material is ultimately responsible for obtaining the permits. Please click here for information regarding the specific requirements for shipment to your location.
Applications:	transfection host
Virus Susceptibility:	Murine leukemia virus
Age:	embryo
Comments:	The NIH/3T3 is highly sensitive to sarcoma virus focus formation and leukemia virus propagation and has proven to be very useful in DNA transfection studies [PubMed ID: 222457]. Tested and found negative for ectromelia virus (mousepox).

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Propagation:	**ATCC complete growth medium:** The base medium for this cell line is ATCC-formulated Dulbecco's Modified Eagle's Medium, Catalog No. 30-2002. To make the complete growth medium, add the following components to the base medium: bovine calf serum to a final concentration of 10%. **Atmosphere:** air, 95%; carbon dioxide (CO2), 5% **Temperature:** 37.0°C **Growth Conditions:** The serum used is important in culturing this

Cell Biology

ATCC® Number:	**CRL-1650™** Order this Item	Price:	**$431.00 (for-profit list price)** **$359.17 (non-profit list price)** **Log In with customer # to see your price**

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Designations:	COS-1
Depositors:	Y Gluzman
Biosafety Level:	2 [Cells Contain PAPOVAVIRUS]
Shipped:	frozen
Medium & Serum:	See Propagation
Growth Properties:	adherent
Organism:	*Cercopithecus aethiops*
Morphology:	fibroblast
Source:	**Organ:** kidney **Cell Type:** SV40 transformed
Cellular Products:	T antigen
Permits/Forms:	In addition to the MTA mentioned above, other ATCC and/or regulatory permits may be required for the transfer of this ATCC material. Anyone purchasing ATCC material is ultimately responsible for obtaining the permits. Please click here for information regarding the specific requirements for shipment to your location.
Applications:	transfection host
Comments:	This is an African green monkey kidney fibroblast-like cell line suitable for transfection by vectors requiring expression of SV40 T antigen. This line contains T antigen, retains complete permissiveness for lytic growth of SV40, supports the replication of ts A209 virus at 40C, and supports the replication of pure populations of SV40 mutants with deletions in the early region. The line was derived from the CV-1 cell line (ATCC ® CCL-70) by transformation with an origin defective mutant of SV40 which codes for wild type T antigen. The cells contain a single integrated copy of the complete early region of the SV40 genome.

Propagation:	**ATCC complete growth medium:** The base medium for this cell line is ATCC-formulated Dulbecco's Modified Eagle's Medium, Catalog No. 30-2002. To make the complete growth medium, add the following components to the base medium: fetal bovine serum to a final concentration of 10%. **Atmosphere:** air, 95%; carbon dioxide (CO2), 5% **Temperature:** 37.0°C **Protocol:**

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ATCC® Number: **CRL-1651™** Order this Item

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Designations:	COS-7
Depositors:	Y Gluzman
Biosafety Level:	2 [Cells Contain SV-40 viral DNA sequences]
Shipped:	frozen
Medium & Serum:	See Propagation
Growth Properties:	adherent
Organism:	*Cercopithecus aethiops*
Morphology:	fibroblast 
Source:	**Organ:** kidney **Cell Type:** SV40 transformed
Cellular Products:	T antigen
Permits/Forms:	In addition to the MTA mentioned above, other ATCC and/or regulatory permits may be required for the transfer of this ATCC material. Anyone purchasing ATCC material is ultimately responsible for obtaining the permits. Please click here for information regarding the specific requirements for shipment to your location.
Applications:	transfection host
Comments:	This is an African green monkey kidney fibroblast-like cell line suitable for transfection by vectors requiring expression of SV40 T antigen. This line contains T antigen, retains complete permissiveness for lytic growth of SV40, supports the replication of ts A209 virus at 40C, and supports the replication of pure populations of SV40 mutants with deletions in the early region. The line was derived from the CV-1 cell line (ATCC ® CCL-70) by transformation with an origin defective mutant of SV40 which codes for wild type T antigen.
Propagation:	**ATCC complete growth medium:** The base medium for this cell line is ATCC-formulated Dulbecco's Modified Eagle's Medium, Catalog No. 30-2002. To make the complete growth medium, add the following components to the base medium: fetal bovine serum to a final concentration of 10%. **Atmosphere:** air, 95%; carbon dioxide (CO2), 5% **Temperature:** 37.0°C **Protocol:**

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ATCC® Number:	**CCL-34™** Order this Item	Price:	**$431.00 (for-profit list price)** **$359.17 (non-profit list price)** **Log In with customer # to see your price**

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Designations:	MDCK (NBL-2)
Depositors:	S Madin, NB Darby
Biosafety Level:	1
Shipped:	frozen
Medium & Serum:	See Propagation
Growth Properties:	adherent
Organism:	*Canis familiaris*
Morphology:	epithelial 
Source:	**Organ:** kidney **Disease:** normal
Cellular Products:	keratin
Permits/Forms:	In addition to the MTA mentioned above, other ATCC and/or regulatory permits may be required for the transfer of this ATCC material. Anyone purchasing ATCC material is ultimately responsible for obtaining the permits. Please click here for information regarding the specific requirements for shipment to your location.
Isolation:	**Isolation date:** September, 1958
Applications:	transfection host
Virus Susceptibility:	Human Coxsackievirus B 5 Reovirus type 2 Adeno-associated virus 4 Vaccinia virus Vesicular stomatitis virus Adeno-associated virus 5 Human Coxsackievirus B 3 Human Coxsackievirus B 4 Human poliovirus 2
Cytogenetic Analysis:	Polyploidy 0.2%. Two large submetacentric chromosomes noted, presumably X chromosomes, and one or two additional chromosomes with median or submedian centromeres.
Age:	adult
Gender:	female
	The MDCK cell line was derived from a kidney of an apparently normal adult female cocker spaniel, September, 1958, by S.H.

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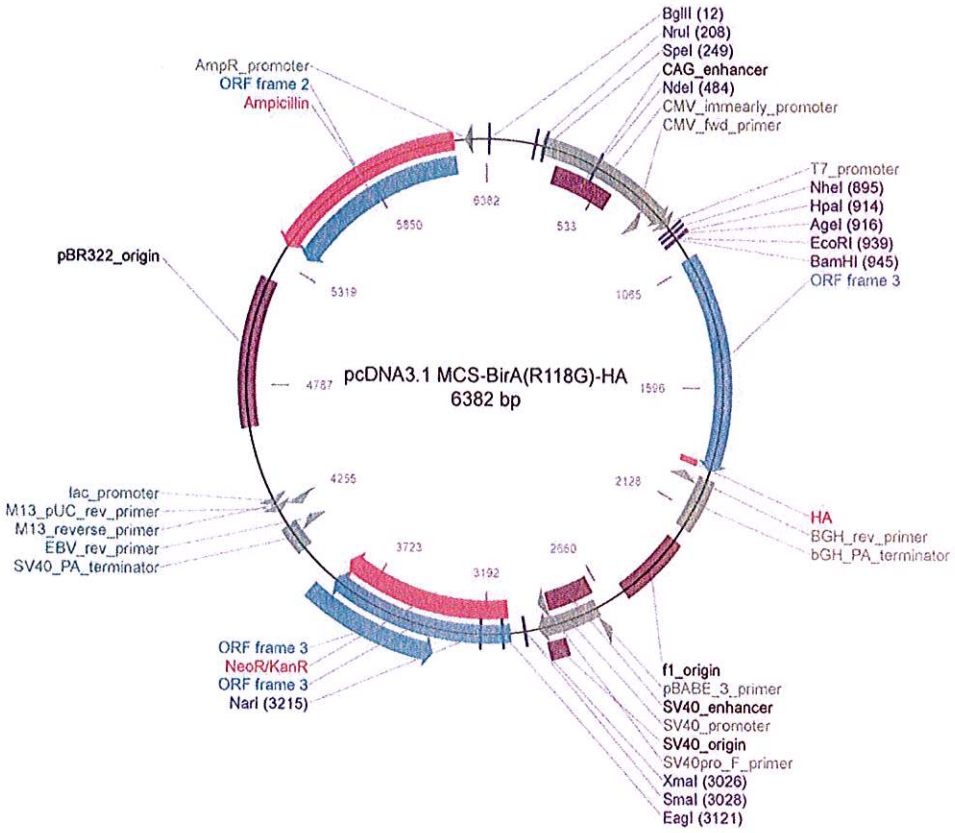
Plasmids

BirA-HA

Plasmid 36047: pcDNA3.1 MCS-BirA(R118G)-HA

Gene/insert name:	BirA(R118G)-HA
Insert size:	993
Species:	E. coli
Fusion protein or tag:	HA
Terminal:	C terminal on insert
Mutation:	R118G
Vector backbone:	pcDNA3.1 (Search Vector Database)
Backbone manufacturer:	Invitrogen
Vector type:	Mammalian Expression
Backbone size w/o insert (bp):	5333
Modifications to Backbone:	Replaces MCS
Cloning method:	Unknown
5' sequencing primer:	CMV-F List of Sequencing Primers
3' sequencing primer:	BGH-rev
Bacterial resistance(s)	Ampicillin
Growth strain(s)	XL1 Blue
Growth temperature (°C):	37
High or low copy:	High Copy
Selectable markers:	Neomycin
Sequence:	View sequences (3)
Map:	View map
Principal Investigator:	Kyle Roux
Terms and Licenses:	MTA

Addgene has sequenced a portion of this plasmid for verification. Click here for the sequencing result.



Feature Name	Start	End
CMV_immearly_promoter	236	852
CAG_enhancer	315	602
CMV_fwd_primer	769	789
T7_promoter	863	881
HA	1914	1940
BGH_rev_primer	1989	1972
bGH_PA_terminator	1975	2202
f1_origin	2265	2571
pBABE_3_primer	2705	2685
SV40_enhancer	2907	2691
SV40_promoter	2703	2972
SV40_origin	2871	2948
SV40pro_F_primer	2933	2952
NeoR/KanR	3090	3878
SV40_PA_terminator	4058	4177
EBV_rev_primer	4146	4165
M13_reverse_primer	4239	4221
M13_pUC_rev_primer	4260	4238
lac_promoter	4303	4274
pBR322_origin	5231	4612
Ampicillin	6246	5386
AmpR_promoter	6316	6288

ORF	Start	End
ORF frame 3	1038	1943
ORF frame 3	3087	3881

ORF	Start	End
ORF frame 3	3932	3396
ORF frame 2	6246	5386

Enzyme Name	Cut
BglII	12
NruI	208
SpeI	249
NdeI	484
NheI	895
HpaI	914
AgeI	916
EcoRI	939
BamHI	945
SmaI	3028
XmaI	3026
EagI	3121
NarI	3215

Article: A promiscuous biotin ligase fusion protein identifies proximal and interacting proteins in mammalian cells. Roux et al (J Cell Biol. 2012 Mar 12. PubMed)

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myc BirA

Browse > Kyle Roux > Roux et al > pcDNA3.1 mycBioID

Plasmid 35700: pcDNA3.1 mycBioID

Gene/insert name:	BirA
Insert size:	1116
Species:	E. coli
Fusion protein or tag:	Myc
Terminal:	N terminal on insert
Mutation:	R118G
Vector backbone:	pcDNA3.1(-) (Search Vector Database)
Backbone manufacturer:	InVitrogen
Vector type:	Mammalian Expression
Backbone size w/o insert (bp):	5400
Modifications to Backbone:	none
Promoter:	cmv
Cloning site 5':	NheI
Site destroyed during cloning:	No
Cloning site 3':	PmeI
Site destroyed during cloning:	No
5' sequencing primer:	CMV-F List of Sequencing Primers
3' sequencing primer:	BGH-rev
Bacterial resistance(s)	Ampicillin
Growth strain(s)	XL1 Blue
Growth temperature (°C):	37
High or low copy:	High Copy
Selectable markers:	Neomycin
Sequence:	View sequences (2)
Map:	View map
Principal Investigator:	Kyle Roux
Terms and Licenses:	MTA

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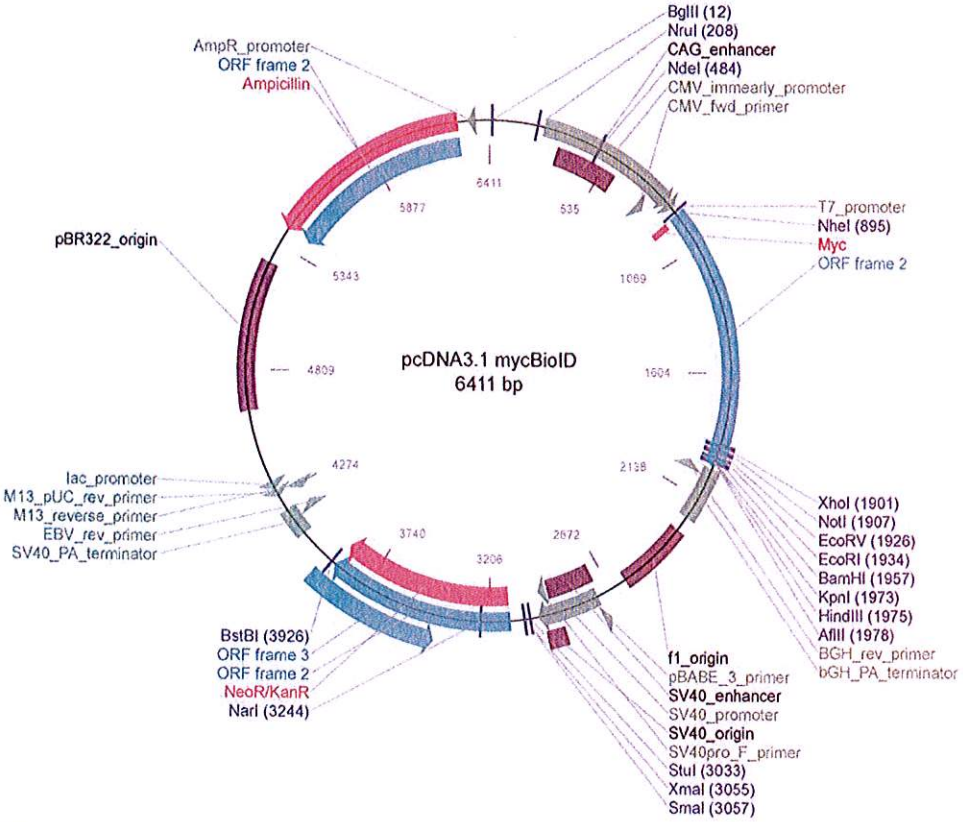

Feature Name	Start	End
CMV_immearly_promoter	236	852
CAG_enhancer	315	602
CMV_fwd_primer	769	789
T7_promoter	863	881
Myc	908	937
BGH_rev_primer	2018	2001
bGH_PA_terminator	2004	2231
f1_origin	2294	2600
pBABE_3_primer	2734	2714
SV40_enhancer	2936	2720
SV40_promoter	2732	3001
SV40_origin	2900	2977
SV40pro_F_primer	2962	2981
NeoR/KanR	3119	3907
SV40_PA_terminator	4087	4206
EBV_rev_primer	4175	4194
M13_reverse_primer	4268	4250
M13_pUC_rev_primer	4289	4267
lac_promoter	4332	4303
pBR322_origin	5260	4641
Ampicillin	6275	5415
AmpR_promoter	6345	6317

ORF	Start	End
ORF frame 2	905	1996
ORF frame 2	3116	3910

ORF	Start	End
ORF frame 3	3961	3425
ORF frame 2	6275	5415

Enzyme Name	Cut
BglII	12
NruI	208
NdeI	484
NheI	895
XhoI	1901
NotI	1907
EcoRV	1926
EcoRI	1934
BamHI	1957
KpnI	1973
HindIII	1975
AflII	1978
StuI	3033
XmaI	3055
SmaI	3057
NarI	3244
BstBI	3926

Article: A promiscuous biotin ligase fusion protein identifies proximal and interacting proteins in mammalian cells. Roux et al (J Cell Biol. 2012 Mar 12. PubMed)

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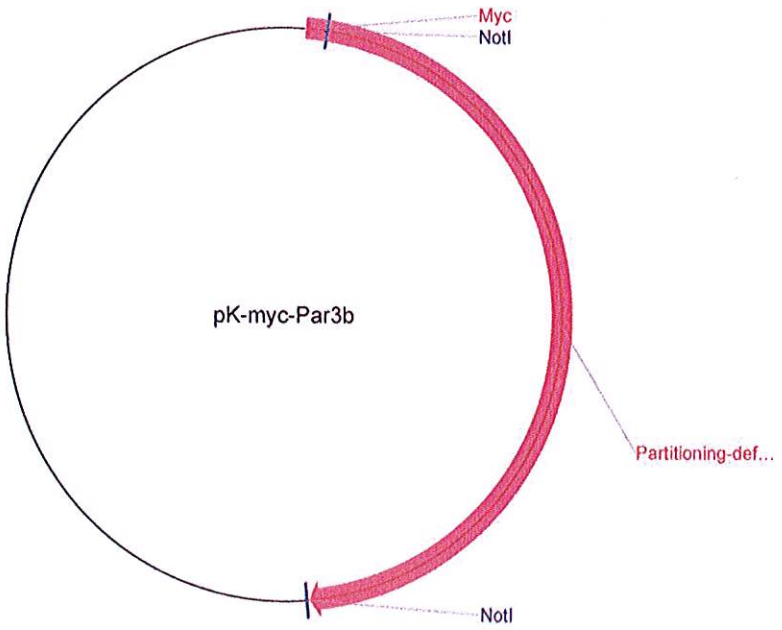
Par3b

Browse > Ian Macara > Joberty et al > pK-myc-Par3b

Plasmid 19388: pK-myc-Par3b

Gene/insert name:	Partitioning-defective protein 3b
Alt name:	pk-myc-Par3b
Alt name:	myc-Par3b
Alt name:	PARD3
Insert size:	4062
Species:	H. sapiens (human)
GenBank ID:	AF467003
Entrez Gene:	PARD3 (Baz, ASIP, PAR3, PARD3A, Bazooka, SE2-5T2, FLJ21015, SE2-5L16, SE2-5LT1, PAR3alpha)
Fusion protein or tag:	Myc
Terminal:	N terminal on backbone
Mutation:	Full length, isoform b.
Vector backbone:	pKMyc (Search Vector Database)
Vector type:	Mammalian Expression
Backbone size w/o insert:	4764
Cloning site 5':	NotI
Site destroyed during cloning:	No
Cloning site 3':	NotI
Site destroyed during cloning:	No
5' sequencing primer:	SP6 List of Sequencing Primers
Bacterial resistance(s)	Ampicillin
Growth strain(s)	DH5alpha
Growth temperature (°C):	37
High or low copy:	High Copy
Sequence:	View sequences (1)
Principal Investigator:	Ian Macara
Terms and Licenses:	MTA

Addgene has sequenced a portion of this plasmid for verification. Click here for the sequencing result.



Article: The cell-polarity protein Par6 links Par3 and atypical protein kinase C to Cdc42. Joberty et al (Nat Cell Biol 2000 Aug;2(8):531-9. PubMed)

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Paxillin

Browse > Rick Horwitz > Laukaitis et al > Paxillin-pEGFP

Plasmid 15233: Paxillin-pEGFP

Gene/insert name:	paxillin
Insert size:	1700
Species:	G. gallus (chicken)
GenBank ID:	L30099
Entrez Gene:	PXN ()
Fusion protein or tag:	GFP
Terminal:	C terminal on backbone
Vector backbone:	pEGFP-N3 (Search Vector Database)
Backbone manufacturer:	Clontech
Vector type:	Mammalian Expression
Backbone size w/o insert (bp):	4700
Cloning site 5':	Bgl II
Site destroyed during cloning:	Yes
Cloning site 3':	Kpn
Site destroyed during cloning:	No
5' sequencing primer:	CMV immediate early gene forward primer List of Sequencing Primers
Bacterial resistance(s)	Kanamycin
Growth strain(s)	DH5alpha
Growth temperature (°C):	37
High or low copy:	High Copy
Selectable markers:	Neomycin
Sequence:	View sequences (2)
Principal Investigator:	Rick Horwitz
Terms and Licenses:	MTA

Addgene has sequenced a portion of this plasmid for verification. Click here for the sequencing result.

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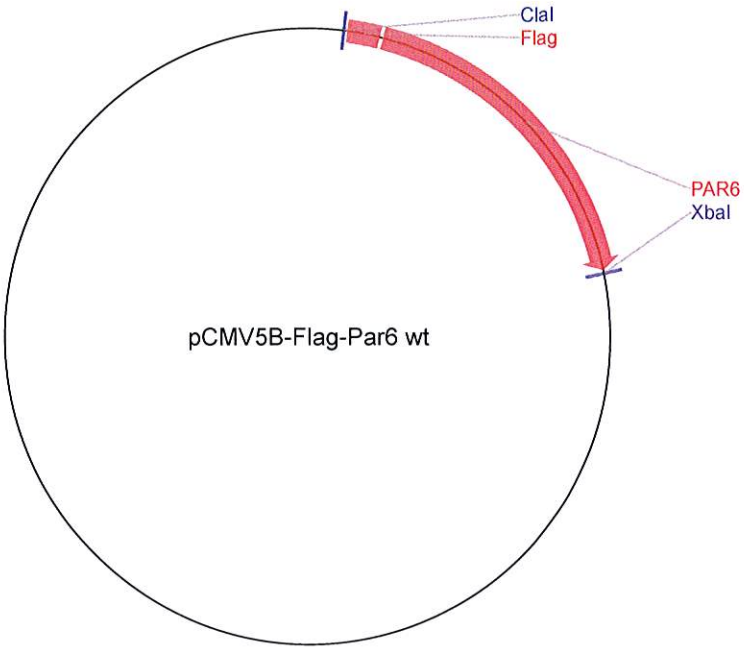
Par6

Browse > Jeff Wrana > Ozdamar et al > pCMV5B-Flag-Par6 wt

Plasmid 11748: pCMV5B-Flag-Par6 wt

Gene/insert name:	PAR6
Insert size:	1000
Species:	M. musculus (mouse)
GenBank ID:	NM_019695
Entrez Gene:	Pard6a (Par6, Par-6, Par6c, TAX40, Tip-40, PAR6alpha, 0710008C04Rik, 2610010A15Rik)
Fusion protein or tag:	Flag
Terminal:	N terminal on insert
Vector backbone:	pCMV5B (Search Vector Database)
Vector type:	Mammalian Expression
Backbone size w/o insert (bp):	4700
Cloning site 5':	ClaI
Site destroyed during cloning:	No
Cloning site 3':	XbaI
Site destroyed during cloning:	No
5' sequencing primer:	CMV-F List of Sequencing Primers
Bacterial resistance(s)	Ampicillin
Growth strain(s)	DH5alpha
Growth temperature (°C):	37
High or low copy:	High Copy
Person or lab that originally cloned the gene/insert:	Tony Pawson
Sequence:	View sequences (1)
Principal Investigator:	Jeff Wrana
Terms and Licenses:	MTA

Addgene has sequenced a portion of this plasmid for verification. Click here for the sequencing result.



Article: Regulation of the polarity protein Par6 by TGFbeta receptors controls epithelial cell plasticity. Ozdamar et al (Science. 2005 Mar 11. 307(5715):1603-9. PubMed)

Please acknowledge the principal investigator and cite this article if you use this plasmid in a publication. Also, please include the text "Addgene plasmid 11748" in your Materials and Methods section.