Modification Form for Permit BIO-UWO-0141

Permit Holder: Sashko Damjanovski

Approved Personnel
(Please stroke out any personnel to be removed)

Michelle Niewansteeg

Logan Walsh

Additional Personnel
(Please list additional personnel here)

MAX SHAFER (SEPT 09 START)

	Please stroke out any approved Biohazards to be removed below	Write additional Biohazards for approval below. *
Approved Microorganisms	E. coli DHS - alpha	
Approved Cells	human (established) Hs 578 BST	human (established) MDA MB 231 MDA MB 435 frog (established) A6
Approved Use of Human Source Material		
Approved GMO		
Approved use of Animals	Xenopus laevis	

* *PLEASE ATTACH A MATERIAL SAFETY DATA SHEET OR EQUIVALENT FOR NEW BIOHAZARDS.*
** *PLEASE ATTACH A BRIEF DESCRIPTION OF THE WORK THAT EXPLAINS THE BIOHAZARDS USED AND HOW THEY WILL BE USED.*

Classification: 1

Date of last Biohazardous Agents Registry Form: Mar 28, 2008

Signature of Permit Holder: S. Damjanovski

BioSafety Officer(s):

Chair,Biohazards Subcommittee:

Modification Form for Permit BIO-UWO-0141

Permit Holder: Sashko Damjanovski

Approved Toxin(s)

* *PLEASE ATTACH A MATERIAL SAFETY DATA SHEET OR EQUIVALENT FOR NEW BIOHAZARDS.*
** *PLEASE ATTACH A BRIEF DESCRIPTION OF THE WORK THAT EXPLAINS THE BIOHAZARDS USED AND HOW THEY WILL BE USED.*

Classification: 1

Date of last Biohazardous Agents Registry Form: Mar 28, 2008

Signature of Permit Holder:

BioSafety Officer(s):

Chair,Biohazards Subcommittee:

June 23, 2009

We wish to begin to use 3 new cell lines in our research.

The MDA MB 231 cell line, and its derivative MDA MB 435 line, are established human epithelial breast adenocarcinoma cell lines that are available from ATCC. Both cell types proliferate relatively quickly and have migratory capabilities, however only the 231 line, and not the 435 has invasive capabilities. Thus when plated on a 3D extracellular matrix substrate *in vit*ro (such as collagen, or commercially available matrigel) the 231 cells can invade the matrix, while the 435 cannot. In addition the *Xenopus laevis* (frog) established epithelial cell line A6, (also from ATCC) will also be used in our migration studies. As our lab studies the functions of matrix metalloproteinases, secreted enzymes that are in part responsible for the cleavage and remodelling of extracellular matrices, we will use these like to look more specifically at the function of our specific matrix metalloproteinase through the transient transfection of our genes into these cells and examine their subsequent invasive capabilities. Work with these cells will all be *in vitro* and performed in the certified tissue culture room in the molecular genetics core in the WSC building (not on out lab in BGS).

Thus in addition to the cell line we are using HS 578 BST, we wish to add
human MDA MB 231 and
human MDA MB 435
frog A6

Thanks

S. Damjanovski

Sashko Damjanovski

ATCC
The Global Bioresource Center™

Search Catalog
Select a Category
Go
Login Search Options

About | Cultures and Products | Science | Standards | Deposit Services | Custom Services | Product Use Policy

ATCC Advanced Catalog Search » Product Details

Product Description

Before submitting an order you will be asked to read and accept the terms and conditions of ATCC's Material Transfer Agreement or, in certain cases, an MTA specified by the depositing institution.

Customers in Europe, Australia, Canada, China, Hong Kong, India, Japan, Korea, Macau, Mexico, New Zealand, Singapore, and Taiwan, R.O.C. must contact a local distributor for pricing information and to place an order for ATCC cultures and products.

Print this Page

Cell Biology

ATCC® Number: HTB-26™ Order this Item
Designations: MDA-MB-231
Biosafety Level: 1
Medium & Serum: See Propagation
Organism: *Homo sapiens* (human)

Price: $256.00
Depositors: R Cailleau
Shipped: frozen
Growth Properties: adherent
Morphology: epithelial
PHOTO

Source:
Organ: mammary gland; breast
Disease: adenocarcinoma
Derived from metastatic site: pleural effusion
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.

Related Cell Culture Products

Applications: transfection host (Nucleofection technology from Lonza
Roche FuGENE® Transfection Reagents)
Receptors: epidermal growth factor (EGF), expressed
transforming growth factor alpha (TGF alpha), expressed
Tumorigenic: Yes

DNA Profile (STR):
Amelogenin: X
CSF1PO: 12,13
D13S317: 13
D16S539: 12
D5S818: 12
D7S820: 8,9
THO1: 7,9.3
TPOX: 8,9
vWA: 15,18

Cytogenetic Analysis: The cell line is aneuploid female (modal number = 64, range = 52 to 68), with chromosome counts in the near-triploid range. Normal chromosomes N8 and N15 were absent. Eleven stable rearranged marker chromosomes are noted as well as unassignable chromosomes in addition to the majority of autosomes that are trisomic. Many of the marker chromosomes are identical to those shown in the karyotype reported by K.L. Satya-Prakash, et al.

Isoenzymes:
AK-1, 1
ES-D, 1
G6PD, B
GLO-I, 2
Me-2, 1-2
PGM1, 1-2
PGM3, 1

Age: 51 years adult

ATCC
The Global Bioresource Center™

Search Catalog
Select a Category
Go
Login Search Options

About | Cultures and Products | Science | Standards | Deposit Services | Custom Services | Product Use Policy

ATCC Advanced Catalog Search » Product Details

Product Description

Before submitting an order you will be asked to read and accept the terms and conditions of ATCC's Material Transfer Agreement or, in certain cases, an MTA specified by the depositing institution.

Customers in Europe, Australia, Canada, China, Hong Kong, India, Japan, Korea, Macau, Mexico, New Zealand, Singapore, and Taiwan, R.O.C. must contact a local distributor for pricing information and to place an order for ATCC cultures and products.

Print this Page

Cell Biology

ATCC® Number:	**HTB-129™** Order this Item	**Price:**	**$264.00**
Designations:	MDA-MB-435S		
Biosafety Level:	1	**Shipped:**	frozen
Medium & Serum:	See Propagation	**Growth Properties:**	adherent
Organism:	*Homo sapiens* (human)	**Morphology:**	spindle shaped
			PHOTO
Source:	**Organ:** previously described as: mammary gland; breast **Disease:** previously described as ductal carcinoma **Derived from metastatic site:** pleural effusion		
Cellular Products:	tubulin; actin		
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.		
	Related Cell Culture Products		
Isolation:	**Isolation date:** 1976		
Tumorigenic:	No		
DNA Profile (STR):	Amelogenin: X CSF1PO: 11 D13S317: 12 D16S539: 13 D5S818: 12 D7S820: 8,10 THO1: 6,7 TPOX: 8,11 vWA: 16,18		
Cytogenetic Analysis:	modal number = 56; range = 55 to 62 The cell line is aneuploid human female (XX), with most chromosome counts in the 55 to 60 range. Normal chromosomes N6, N11, and N22 were absent, while chromosomes N7, N13, N18 and N21 were single. Most of the remainder of normal chromosomes were usually paired, but chromosome N2 was triple. Nineteen marker chromosomes were identified, with most of them formed from structural alterations of the missing copies of the normal chromosomes. Six of these markers involve regions of chromosome N7, while three are recognized as derivatives of chromosome N6. Regions of a third copy of the normal and paired chromosomes N3, N15, N17, N20 are noted in markers M1, M2, M15, and M5, respectively.		
Isoenzymes:	AK-1, 1 ES-D, 1 G6PD, B GLO-I, 2 PGM1, 2 PGM3, 1		
Age:	31 years adult		

ATCC
The Global Bioresource Center™

Search Catalog
Select a Category
Go
Login Search Options

About | Cultures and Products | Science | Standards | Deposit Services | Custom Services | Product Use Policy

ATCC Advanced Catalog Search » Product Details

Product Description

Before submitting an order you will be asked to read and accept the terms and conditions of ATCC's Material Transfer Agreement or, in certain cases, an MTA specified by the depositing institution.

Customers in Europe, Australia, Canada, China, Hong Kong, India, Japan, Korea, Macau, Mexico, New Zealand, Singapore, and Taiwan, R.O.C. must contact a local distributor for pricing information and to place an order for ATCC cultures and products.

Print this Page

Cell Biology

ATCC® Number:	**CCL-102™** Order this Item	**Price:**	**$323.00**
Designations:	A6	**Depositors:**	KA Rafferty
Biosafety Level:	1	**Shipped:**	frozen
Medium & Serum:	See Propagation	**Growth Properties:**	adherent
Organism:	Xenopus laevis (frog, South African clawed)	**Morphology:**	epithelial

Source: **Organ:** kidney
Disease: normal

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.

Related Cell Culture Products

Virus Susceptibility: FV-4 (Frog virus)

Virus Resistance: poliovirus 1; vesicular stomatitis (Indiana); herpes simplex; vaccinia; pseudorabies

Reverse Transcript: negative

Age: adult

Gender: male

Propagation: **ATCC complete growth medium:** NCTC 109 medium, 75%; distilled water, 15%; fetal bovine serum, 10%
Temperature: 26.0°C

Subculturing: **Subcultivation Ratio:** A subcultivation ratio of 1:2 to 1:3 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 flasks.

Preservation: culture medium 95%; DMSO, 5%

Related Products: recommended serum:ATCC 30-2020

References: 21414: . Biology of amphibian tumors. New York: Springer-Verlag; 1969.
33005: Rokaw MD, et al. Regulation of a sodium channel-associated G-protein by aldosterone. J. Biol. Chem. 271: 4491-4496, 1996. PubMed: 8626803

Return to Top

BIO-UWO-0141

THE UNIVERSITY OF WESTERN ONTARIO
BIOHAZARDOUS AGENTS REGISTRY FORM
Revised Biohazards Subcommittee: September, 2007

This form must be completed by each Principal Investigator holding a grant administered by the University of Western Ontario where the use of biohazardous infectious agents are described in the experimental work proposed. The form must also be completed if animal work is proposed involving the use of biohazardous agents or animal carrying zoonotic agents infectious to humans. Containment Levels will be required in accordance with Laboratory Biosafety Guidelines, 3rd edition, 2004, Health Canada (HC) or Containment Standards for Veterinary Facilities, 1st edition 1996, Canadian Food Inspection Agency (CFIA).

Completed forms are to be returned to Occupational Health and Safety (Stevenson-Lawson Building, Room 60) for forward to the Biohazard Subcommittee. For questions regarding this form, please contact the Biosafety Coordinator at extension 81135. If there are changes to the information on this form (excluding grant title and funding agencies) modifications must be completed and sent to Occupational Health and Safety. See website: www.uwo.ca/humanresources

PRINCIPAL INVESTIGATOR SASHKO DAMJANOVSKI
SIGNATURE
DEPARTMENT BIOLOGY
ADDRESS 1151 RICHMOND ST LONDON ON
PHONE NUMBER (519) 661-2111 x 84704
EMAIL sdamjano@uwo.ca

Location of experimental work to be carried out: Building(s) BGS WSC Room(s) 318 328 (Being Renovated)

*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 it being sent to Occupational Health and Safety (See Section 12.0, Approvals). For research being done at Lawson Health Research Institute, London Regional Cancer Centre, Child and Parent Research Institute or Robarts Research Institute, University Biosafety Committee members can also sign as the Safety Officer.

GRANT TITLE(S): MMP ACTIVATION DURING XENOPUS DEVELOPMENT

PLEASE ATTACH A BRIEF DESCRIPTION OF YOUR WORK, SUCH AS THE RESEARCH GRANT SUMMARY THAT EXPLAINS THE BIOHAZARDS USED AND HOW THEY WILL BE USED. PROJECTS SUBMITTED WITHOUT A SUMMARY WILL NOT BE REVIEWED.

FUNDING AGENCY/AGENCIES NSERC

Names of all personnel working under Principal Investigators super vision in this location:

LOGAN WALSH
MICHELLE Niewensteeg

*** DESCRIPTION MUST BE ATTACHED TO THIS FORM OR PROJECT WILL NOT BE REVIEWED***

1.0 Microorganisms

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

1.2 Please complete the table below:

Name of Biological agent(s)	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?	Source/ Supplier	Health Canada or CFIA Containment Level
Bacteria	☒ Yes ☒ No	☒ Yes ☒ No	○ Yes ☒ No	50mL.	Invitrogen	☒ 1 ○ 2 ○ 3
(DH5α)	○ Yes ○ No	○ Yes ○ No	○ Yes ○ No			○ 1 ○ 2 ○ 3
	○ Yes ○ No	○ Yes ○ No	○ Yes ○ No			○ 1 ○ 2 ○ 3
	○ Yes ○ No	○ Yes ○ No	○ Yes ○ No			○ 1 ○ 2 ○ 3

Please attach a Material Safety Data Sheet or equivalent from the supplier.

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 in the table below

Cell Type	Is this cell type used in your work?	Source of Primary Cell Culture Tissue
Human	○ Yes ○ No	
Rodent	○ Yes ○ No	
Non-human primate	○ Yes ○ No	
Other (specify)		

2.3 Please indicate the type of established cells that will be grown in culture in the table below.

Cell Type	Is this cell type used in your work?	Specific cell line(s)	Supplier / Source
Human	☒ Yes ○ No	Hs 578Bst	ATCC # HTB 125
Rodent	○ Yes ○ No		
Non-human primate	○ Yes ○ No		
Other (specify)	○ Yes ○ No		

2.4 For above named cell types(s) indicate HC or CFIA containment level required ☒ 1 ○ 2 ○ 3

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

*** DESCRIPTION MUST BE ATTACHED TO THIS FORM OR PROJECT WILL NOT BE REVIEWED***

3.0 Use of Human Source Materials

3.1 Does your work involve the use of human source materials? O YES Ø 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 Known to Be Infected With An Infectious Agent? YES/NO**	**Name of Infectious Agent (If applicable)**	**HC or CFIA Containment Level** (select one)
Human Blood (whole) or other Body Fluid		O Yes O No		O 1 O 2 O 3
Human Blood (fraction) or other Body Fluid		O Yes O No		O 1 O 2 O 3
Human Organs (unpreserved)		O Yes O No		O 1 O 2 O 3
Human Tissues (unpreserved)		O Yes O No		O 1 O 2 O 3
Human Organs (preserved)		O Yes O No		O 1 O 2 O 3

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? Ø YES O NO
If no, please proceed to Section 5.0

4.2 Will genetic sequences from the following be involved:

- HIV O YES Ø NO
  if YES specify_____
- HTLV 1 or 2 or genes from any CDC class 1 pathogens O YES Ø NO
  if YES specify_____
- Other human or animal pathogen and or their toxins O YES Ø NO
  if YES specify_____

4.3 Will intact genetic sequences be used from

- SV 40 Large T antigen O YES Ø NO If YES specify_____
- Known oncogenes O YES Ø NO If YES specify_____

4.4 Will a live viral vector(s) or bacterial plasmid be used for gene transduction O YES Ø NO
If YES name _____.
Please attach a Material Safety Data Sheet or equivalent.

4.5 List specific vector(s) to be used: _____

4.6 Will virus be replication defective O YES Ø NO

4.7 Will virus be infectious to humans or animals O YES Ø NO

4.8 Will this be expected to increase the Containment Level required O YES Ø NO

*** DESCRIPTION MUST BE ATTACHED TO THIS FORM OR PROJECT WILL NOT BE REVIEWED***

5.0 Human Gene Therapy Trials

5.1 Will human clinical trials using the viral vector in 4.0 be conducted? O YES ⊗ NO
If no, please proceed to Section 6.0
If YES attach a full description of the make-up of the virus.

5.2 Will virus be able to replicate in the host? O YES ⊗ NO

5.3 How will the virus be administered? _____

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

5.5 Has human ethics approval been obtained? O YES ⊗ NO (NA) O PENDING

6.0 Animal Experiments

6.1 Will any of the agents listed be used in live animals? O YES O NO
If no, please proceed to section 7.0

6.2 Name of animal species to be used Xenopus laevis

6.3 AUS protocol # 2005-027-05

6.4 If using murine cell lines, have they been tested for murine pathogens? ⊘ YES O NO N/A

7.0 Use of Animal species with Zoonotic Hazards

7.1 Will any of the following animals or their organs, tissues, lavages or other bodily fluids including blood be used:

- Pound source dogs O YES ⊗ NO
- Pound source cats O YES ⊗ NO
- Cattle, sheep or goats O YES ⊗ NO
- Non- Human Primates O YES ⊗ NO If YES specify species _____
- Wild caught animals O YES ⊗ NO If YES specify species _____
  colony # _____
- Birds O YES ⊗ NO
- Others (wild or domestic) O YES ⊗ NO

8.0 Biological Toxins

8.1 Will toxins of biological origin be used? O YES ⊗ NO
If no, please proceed to Section 9.0

8.2 If YES, please name the toxin _____

8.3 What is the LD_{50} (specify species) of the toxin _____

8.4 Please attach information, such as a Material Safety Data Sheet, for the toxin(s) used.

* DESCRIPTION MUST BE ATTACHED TO THIS FORM OR PROJECT WILL NOT BE REVIEWED*

9.0 Import Requirements

9.1 Will the agent be imported? O YES ☒ NO
If no, please proceed to Section 10.0
If yes, country of origin_____

9.2 Has an Import Permit been obtained from HC for human pathogens? O YES O NO

9.3 Has an import permit been obtained from CFIA for animal pathogens? O YES O NO

9.4 Has the import permit been sent to OHS? O YES O NO
If yes, Permit # _____

10.0 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
- Employee Health and Safety Orientatioin

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

SIGNATURE _____

11.0 Containment Levels

11.1 For the work described in sections 1.0 to 9.0, please indicate the highest HC or CFIA Containment Level required. ☒1 O2 O3

11.2 Has the facility been certified by OHS for this level of containment? ☒ YES O NO

11.3 If yes, please give the date and permit number: _____

BG 5318 closed for renovations until 2009. sharing WSC 323 with Dr Kohalmi under her level 1 permit.

12.0 Approvals

UWO Biohazard Subcommittee.

Signature G M Kidder Date 28 Mar '08

Safety Officer for Institution where experiments will take place

Signature _____ Date March 28, 2008

Safety Officer for University of Western Ontario (if different from above)

Signature _____ Date _____

Expiry Date (3 years from Approval): _____

*** DESCRIPTION MUST BE ATTACHED TO THIS FORM OR PROJECT WILL NOT BE REVIEWED***