Turley, Eva

Modification Form for Permit BIO-URCC-0006

Permit Holder: Eva Turley

BIO-URCC-0006

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

Jenny Ma

Additional Personnel
(Please list additional personnel here)

Lin Wang
Conny Toelg
Jing Zhang
Colleen Biggs

	Please stroke out any approved Biohazards to be removed below	Write additional Biohazards for approval below. *
Approved Microorganisms	E. coli (DH5 alpha), retrovirus moloney murine leukemia virus	HB 101 BL21 (DE3) > E. Coli
Approved Cells	rodent (primary), mouse fibroblast cells, human (established), prostat stem cells, rodent (established), mouse fibroblastic cells	MDA MB 231, mcf 7, 10T½, C3 10T½, Rhamn-1- mef, CD44-/- MEF Rhamn-1-:CD44-/- MEF, Rhamn+ mefs 10T½, Rat mesenchymal stem cells, RAW 264.7, Rat dermal fibroblasts.
Approved Use of Human Source Material	tumour biopsy	
Approved GMO	retrovirus: moloney murine leukemia virus, oncogenes RHAM m/HmaR, RAS, mEK1, pBabe vector	
Approved use of Animals	mouse lines rat (until end of Sept. 09).	mouse lines
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: 2

Date of last Biohazardous Agents Registry Form: Jun 18, 2008

Signature of Permit Holder: [signature]

BioSafety Officer(s): Dave Ryden SEPT 17/09

Chair,Biohazards Subcommittee: _____

Description of Research Use of Cell Lines in Turley Laboratory

E.Coli strains:

HB101
BLz1 (DE3)

These are used for production of recombinant GST-Rhamm protein, which is used for binding analyses of Rhamm to hyaluronan mimetics (to be used for imaging tumor progenitor cells). As well recombinant GST-Rhamm protein is used as an antigen for producing monoclonal and polyclonal anti-Rhamm antibodies. Finally recombinant GST-Rhamm protein is used as a soluble inhibitor of Rhamm function, particularly for in vivo analyses.

Murine (rat and mouse) Cell Lines:

Rat Dermal Fibroblasts
RAW 264.7 (macrophage line)

These murine cell lines are used for in vitro assessment of the consequences of blocking Rhamm antibodies and other reagents on cell motility, proliferation and signaling. Our research using these cell lines focuses upon the consequences of impaired Rhamm function on wound repair. These cell lines were purchased from ATCC and safety sheets have been sent.

10T1/2 fibroblasts
C3-10T1/2 fibroblasts
Rhamm-transfected 10T1/2 fibroblasts

These cell lines are used for tumor studies. We have shown that Rhamm is required for mesenchymal tumor initiation and therefore we use fibroblast cell lines such as 10T1/2 for transfection of Rhamm forms and C3-10T1/2 for transfection of dominant inhibitory forms of Rhamm. These transiently modified fibroblasts are grown in NOD-SCID mice to assess for tumorigenicity. These cell lines are also used for identifying the key signaling pathways controlled by Rhamm that are relevant to tumorigenesis. The 10T1/2 and C3-10T1/2 cell lines were purchased from ATCC and safety sheets have been sent. The Rhamm transfected 10T1/2 fibroblasts were generated in my laboratory.

Rhamm-/- MEF
CD44-/- MEF
Rhamm-/-:CD44-/- MEF

These mouse embryonic fibroblast lines were originally isolated as primary cell cultures and spontaneously immortalized in my laboratory. They are used to identify signaling pathways regulated by Rhamm and CD44 that are relevant to wound repair and tumorigenesis.

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Cell Biology

ATCC® Number: HTB-26™ Order this Item **Price:** $256.00

Designations:	MDA-MB-231
Depositors:	R Cailleau
Biosafety Level:	1
Shipped:	frozen
Medium & Serum:	See Propagation
Growth Properties:	adherent
Organism:	*Homo sapiens* (human)
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.
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

Related
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Cell Micro
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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

Gender: female

Ethnicity: Caucasian

Comments: The cells express the WNT7B oncogene [PubMed: 8168088].

Propagation: **ATCC complete growth medium:** The base medium for this cell line is ATCC-formulated Leibovitz's L-15 Medium, Catalog No. 30-2008. 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, 100%
Temperature: 37.0°C

Subculturing: **Protocol:**

1. Remove and discard culture medium.
2. Briefly rinse the cell layer with 0.25% (w/v) Trypsin- 0.53 mM EDTA solution to remove all traces of serum that contains trypsin inhibitor.
3. Add 2.0 to 3.0 ml of Trypsin-EDTA solution to flask and observe cells under an inverted microscope until cell layer is dispersed (usually within 5 to 15 minutes).
   Note: To avoid clumping do not agitate the cells by hitting or shaking the flask while waiting for the cells to detach. Cells that are difficult to detach may be placed at 37°C to facilitate dispersal.
4. Add 6.0 to 8.0 ml of complete growth medium and aspirate cells by gently pipetting.
5. Add appropriate aliquots of the cell suspension to new culture vessels.
6. Incubate cultures at 37°C without CO2.

Subcultivation Ratio: A subcultivation ratio of 1:2 to 1:4 is recommended
Medium Renewal: 2 to 3 times per week

Preservation: **Freeze medium:** Complete growth medium supplemented with 5% (v/v) DMSO
Storage temperature: liquid nitrogen vapor phase

Related Products:
purified DNA:ATCC 45518
purified DNA:ATCC 45519
purified DNA:ATCC HTB-26D
purified RNA:ATCC HTB-26R
recommended serum:ATCC 30-2020
Recommended medium (without the additional supplements or serum described under ATCC Medium):ATCC 30-2008

References: 1206: Brinkley BR, et al. Variations in cell form and cytoskeleton in human

breast carcinoma cells in vitro. Cancer Res. 40: 3118-3129, 1980. PubMed: 7000337
22182: Cruciger Q, et al. Morphological, biochemical and chromosomal characterization of breast tumor lines from pleural effusions. In Vitro 12: 331, 1976.
22429: Sicillano MJ, et al. Mutually exclusive genetic signatures of human breast tumor cell lines with a common chromosomal marker. Cancer Res. 39: 919-922, 1979. PubMed: 427779
22532: Cailleau R, et al. Breast tumor cell lines from pleural effusions. J. Natl. Cancer Inst. 53: 661-674, 1974. PubMed: 4412247
22656: Cailleau R, et al. Long-term human breast carcinoma cell lines of metastatic origin: preliminary characterization. In Vitro 14: 911-915, 1978. PubMed: 730202
22977: Bates SE, et al. Expression of the transforming growth factor-alpha/epidermal growth factor receptor pathway in normal human breast epithelial cells. Endocrinology 126: 596-607, 1990. PubMed: 2294006
23010: Dickstein B, et al. Increased epidermal growth factor receptor in an estrogen-responsive, adriamycin-resistant MCF-7 cell line. J. Cell. Physiol. 157: 110-118, 1993. PubMed: 8408230
23113: Huguet EL, et al. Differential expression of human Wnt genes 2, 3, 4, and 7B in human breast cell lines and normal and disease states of human breast tissue. Cancer Res. 54: 2615-2621, 1994. PubMed: 8168088
26321: Satya-Prakash KL, et al. Cytogenetic analysis on eight human breast tumor cell lines: high frequencies of 1q, 11q and HeLa-like marker chromosomes. Cancer Genet. Cytogenet. 3: 61-73, 1981. PubMed: 7272986
32272: Katayose Y, et al. Promoting apoptosis: a novel activity associated with the Cyclin-dependent kinase inhibitor p27. Cancer Res. 57: 5441-5445, 1997. PubMed: 9407946
32275: Littlewood-Evans AJ, et al. The osteoclast-associated protease cathepsin K is expressed in human breast carcinoma. Cancer Res. 57: 5386-5390, 1997. PubMed: 9393764
32341: Sheng S, et al. Maspin acts at the cell membrane to inhibit invasion and motility of mammary and prostatic cancer cells. Proc. Natl. Acad. Sci. USA 93: 11669-11674, 1996. PubMed: 8876194
32489: De Vincenzo R, et al. Antiproliferative activity of colchicine analogues on MDR-positive and MDR-negative human cancer cell lines. Anticancer Drug Des. 13: 19-33, 1998. PubMed: 9474240
33021: Soker S, et al. Characterization of novel vascular endothelial growth factor (VEGF) receptors on tumor cells that bind VEGF165 via its exon 7-endoded domain. J. Biol. Chem. 271: 5761-5767, 1996. PubMed: 8621443

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The Web site for the CDC's Office of Health and Safety has complete descripti levels in the text of the publication *Biosafety in Microbiological and Biomedica* (BMBL) 5th Edition (HHS Publication No. (CDC) 93-8395. U.S. Department of Services, Centers for Disease Control and Prevention and National Institutes o Government Printing Office: Washington DC; 2007). It is available in its entire Information on agent risk assessment may be found in the Agent Summary St publication.

The actual risk associated with handling a biological agent depends not only o agent, but also on the laboratory manipulations employed during its handling. upon each recipient of an ATCC culture or product to fully assess the potential it in their laboratory. To help you in that assessment we have provided the rel

- For further information on the classification of human etiologic agents, U.S. Department of Health and Human Services, Centers for Disease Cc Prevention's Office of Health and Safety.

- For guidelines for research involving recombinant DNA molecules, pleas Department of Health and Human Services, National Institutes of Healt Biotechnology Activities.

- For further information on the classification of contagious or infectious or plant pests, please consult the U.S. Department of Agriculture, Anim Inspection Service.

- American Biological Safety Association
- Public Health Agency of Canada - Population and Public Health Branch

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Cell Biology

ATCC® Number:	**CCL-226™** Order this Item	**Price:**	**$264.00**
Designations:	C3H/10T1/2, Clone 8		**Related**
Depositors:	C Heidelberger		NCBI Entr
Biosafety Level:	1		Cell Micro
Shipped:	frozen		Make a Dc
Medium & Serum:	See Propagation		Frequently
Growth Properties:	adherent		Material T
Organism:	*Mus musculus* (mouse)		Technical
Morphology:	fibroblast PHOTO		Related C
Source:	**Strain:** C3H **Organ:** embryo		
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 (Roche FuGENE® Transfection Reagents)		
Tumorigenic:	No		
Reverse Transcript:	negative		
Antigen Expression:	H-2k		
Cytogenetic Analysis:	Mouse karyotype with a modal number of 80 chromosomes.		
Age:	embryo		

Comments:

C3H/10T1/2, Clone 8 was isolated by C. Reznikoff, D. Brankow and C. Heidelberger in 1972 from a line of C3H mouse embryo cells. [23019]
The cells are very sensitive to post confluence inhibition of cell division, do not produce tumors in syngeneic mice, have no background of spontaneous transformation, nor do they contain overt endogenous transforming murine leukemia or sarcoma viruses. [22697]
The cells are contact sensitive.
There is no detectable background spontaneous transformation.
They are highly susceptible to transformation by chemical agents. [1208]
Tested and found negative for ectromelia virus (mousepox).
NOTE: THE INOCULATION DENSITY, FEEDING AND HARVESTING SCHEDULES MUST BE FOLLOWED RIGIDLY IF THE LINE IS TO RETAIN ITS ESSENTIAL CHARACTERISTICS.
THE BATCH OF SERUM USED FOR GROWTH AND FOR TRANSFORMATION ASSAYS MAY AFFECT BOTH THE MORPHOLOGY OF THIS LINE AND THE RESULTS OBTAINED.
Monolayers established and maintained for the standard transformation assay should be free of all foci after 6 weeks. [1208]
The donor recommends that the line be used between the 5th and 15th passages only.

Propagation:

ATCC complete growth medium: The base medium for this cell line is Eagle's Basal medium with 2 mM L-glutamine , 1.5 g/L sodium bicarbonate and Earle's BSS. To make the complete growth medium, add the following components to the base medium: heat-inactivated fetal bovine serum to a final concentration of 10%.
Temperature: 37.0°C

Subculturing:

Protocol: Remove medium, and rinse with 0.25% trypsin, 0.53 mM 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. SUBCULTURE MUST BE DONE BEFORE THE CULTURE REACHES CONFLUENCE.
Subcultivation Ratio: Seed new flasks at 2000 viable cells/sq cm.
Medium Renewal: Once between subcultures if necessary

Preservation:

Freeze medium: Complete growth medium 95%; DMSO, 5%
Storage temperature: liquid nitrogen vapor temperature

References:

1208: Reznikoff CA, et al. Quantitative and qualitative studies of chemical transformation of cloned C3H mouse embryo cells sensitive to postconfluence inhibition of cell division. Cancer Res. 33: 3239-3249, 1973. PubMed: 4796800
1209: Terzaghi M, Little JB. Repair of potentially lethal radiation damage in mammalian cells is associated with enhancement of malignant transformation. Nature 253: 548-549, 1975. PubMed: 1167940
1210: Mondal S, Heidelberger C. Transformation of C3H/10T1/2 CL8 mouse embryo fibroblasts by ultraviolet irradiation and a phorbol ester. Nature 260: 710-711, 1976. PubMed: 1264242
22440: Smith GJ, et al. Clonal analysis of the expression of multiple transformation phenotypes and tumorigenicity by morphologically transformed 10T1/2 cells. Cancer Res. 53: 500-508, 1993. PubMed: 8425183
22697: Rapp UR, et al. Endogenous oncornaviruses in chemically induced transformation. I. Transformation independent of virus production. Virology 65: 392-409, 1975. PubMed: 165619
23019: Reznikoff CA, et al. Establishment and characterization of a cloned line of C3H mouse embryo cells sensitive to postconfluence inhibition of division. Cancer Res. 33: 3231-3238, 1973. PubMed: 4357355
33039: Jain MK, et al. Molecular cloning and characterization of SmLIM, a developmentally regulated LIM protein preferentially expressed in aortic smooth muscle cells. J. Biol. Chem. 271: 10194-10199, 1996. PubMed: 8626582

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Cell Biology

ATCC® Number:	**HTB-22™** Order this Item	**Price:**	**$264.00**
Designations:	MCF7		**Related**
Depositors:	CM McGrath		NCBI Entr
Biosafety Level:	1		Cell Micro
Shipped:	frozen		Make a De
Medium & Serum:	See Propagation		Frequently
Growth Properties:	adherent		Material T
Organism:	*Homo sapiens* (human)		Technical
Morphology:	epithelial		Related C
	PHOTO		
Source:	**Organ:** mammary gland; breast **Disease:** adenocarcinoma **Derived from metastatic site:** pleural effusion **Cell Type:** epithelial		
Cellular Products:	insulin-like growth factor binding proteins (IGFBP) BP-2; BP-4; BP-5		
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 (Nucleofection technology from Lonza Roche FuGENE® Transfection Reagents)		
Receptors:	estrogen receptor, expressed		
Antigen Expression:	Blood Type O; Rh+		
DNA Profile (STR):	Amelogenin: X		

CSF1PO: 10
D13S317: 11
D16S539: 11,12
D5S818: 11,12
D7S820: 8,9
THO1: 6
TPOX: 9,12
vWA: 14,15

Cytogenetic Analysis: modal number = 82; range = 66 to 87.
The stemline chromosome numbers ranged from hypertriploidy to hypotetraploidy, with the 2S component occurring at 1%. There were 29 to 34 marker chromosomes per S metaphase; 24 to 28 markers occurred in at least 30% of cells, and generally one large submetacentric (M1) and 3 large subtelocentric (M2, M3, and M4) markers were recognizable in over 80% of metaphases. No DM were detected. Chromosome 20 was nullisomic and X was disomic.

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

Age: 69 years adult

Gender: female

Ethnicity: Caucasian

Comments: The MCF7 line retains several characteristics of differentiated mammary epithelium including ability to process estradiol via cytoplasmic estrogen receptors and the capability of forming domes.The cells express the WNT7B oncogene [PubMed: 8168088].
Growth of MCF7 cells is inhibited by tumor necrosis factor alpha (TNF alpha).
Secretion of IGFBP's can be modulated by treatment with anti-estrogens.

Propagation: **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 the following components to the base medium: 0.01 mg/ml bovine insulin; fetal bovine serum to a final concentration of 10% .
Atmosphere: air, 95%; carbon dioxide (CO2), 5%
Temperature: 37.0°C

Subculturing: **Protocol:** Volumes used in this protocol are for 75 sq cm flasks; proportionally reduce or increase amount of dissociation medium for culture vessels of other sizes.
Note: if floating cells are present, it is recommended that they be transferred at the first two (2) subcultures as described below. It is not necessary to transfer floating cells for subsequent subcultures.

1. Remove culture medium to a centrifuge tube.
2. Briefly rinse the cell layer with 0.25% (w/v) Trypsin - 0.53 mM EDTA solution to remove all traces of serum which contains trypsin inhibitor.
3. Add 2.0 to 3.0 ml of Trypsin-EDTA solution to flask and observe cells under an inverted microscope until cell layer is dispersed (usually within 5 to 15 minutes).
   Note: To avoid clumping do not agitate the cells by hitting or shaking the flask while waiting for the cells to detach. Cells that are difficult to detach may be placed at 37C to facilitate dispersal.
4. Add 6.0 to 8.0 ml of complete growth medium and aspirate cells by gently pipetting.
5. Transfer the cell suspension to the centrifuge tube with the medium and cells from step 1, and centrifuge at approximately 125 xg for 5 to 10 minutes. Discard the supernatant.
6. Resuspend the cell pellet in fresh growth medium. Add appropriate aliquots of the cell suspension to new culture vessels.
7. Incubate cultures at 37C.

Subcultivation Ratio: A subcultivation ratio of 1:3 to 1:6 is recommended
Medium Renewal: 2 to 3 times per week

Preservation:
Freeze medium: Complete growth medium supplemented with 5% (v/v) DMSO
Storage temperature: liquid nitrogen vapor phase

Doubling Time: 29 hrs

Related Products:
purified DNA:ATCC HTB-22D
purified RNA:ATCC HTB-22R
0.25% (w/v) Trypsin - 0.53 mM EDTA in Hank' BSS (w/o Ca++, Mg++):ATCC 30-2101
Cell culture tested DMSO:ATCC 4-X
recommended serum:ATCC 30-2020
Recommended medium (without the additional supplements or serum described under ATCC Medium):ATCC 30-2003

References:
21405: Sugarman BJ, et al. Recombinant human tumor necrosis factor-alpha: effects on proliferation of normal and transformed cells in vitro. Science 230: 943-945, 1985. PubMed: 3933111
22871: Takahashi K, Suzuki K. Association of insulin-like growth-factor-I-induced DNA synthesis with phosphorylation and nuclear exclusion of p53 in human breast cancer MCF-7 cells. Int. J. Cancer 55: 453-458, 1993. PubMed: 8375929
23046: Brandes LJ, Hermonat MW. Receptor status and subsequent sensitivity of subclones of MCF-7 human breast cancer cells surviving exposure to diethylstilbestrol. Cancer Res. 43: 2831-2835, 1983. PubMed: 6850594
23079: Lan MS, et al. Polypeptide core of a human pancreatic tumor mucin antigen. Cancer Res. 50: 2997-3001, 1990. PubMed: 2334903
23107: Pratt SE, Pollak MN. Estrogen and antiestrogen modulation of MCF7 human breast cancer cell proliferation is associated with specific alterations in accumulation of insulin-like growth factor-binding proteins in conditioned media. Cancer Res. 53: 5193-5198, 1993. PubMed: 7693333
23113: Huguet EL, et al. Differential expression of human Wnt genes 2, 3, 4, and 7B in human breast cell lines and normal and disease states of human breast tissue. Cancer Res. 54: 2615-2621, 1994. PubMed: 8168089
23217: Soule HD, et al. A human cell line from a pleural effusion derived from a breast carcinoma. J. Natl. Cancer Inst. 51: 1409-1416, 1973. PubMed: 4357757
25065: Bellet D, et al. Malignant transformation of nontrophoblastic cells is associated with the expression of chorionic gonadotropin beta genes normally transcribed in trophoblastic cells. Cancer Res. 57: 516-523, 1997. PubMed: 9012484
32275: Littlewood-Evans AJ, et al. The osteoclast-associated protease cathepsin K is expressed in human breast carcinoma. Cancer Res. 57: 5386-5390, 1997. PubMed: 9393764
32278: Komarova EA, et al. Intracellular localization of p53 tumor suppressor protein in gamma-irradiated cells is cell cycle regulated and determined by the nucleus. Cancer Res. 57: 5217-5220, 1997. PubMed: 9393737
32285: van Dijk MA, et al. A functional assay in yeas for the human estrogen receptor displays wild-type and variant estrogen receptor messenger RNAs present in breast carcinoma. Cancer Res. 57: 3478-3485, 1997. PubMed: 9270016
32288: Landers JE, et al. Translational enhancement of mdm2 oncogene expression in human tumor cells containing a stabilized wild-type p53 protein. Cancer Res. 57: 3562-3568, 1997. PubMed: 9270029
32344: Umekita Y, et al. Human prostate tumor growth in athymic mice: inhibition by androgens and stimulation by finasteride. Proc. Natl. Acad. Sci. USA 93: 11802-11807, 1996. PubMed: 8876218
32467: Zamora-Leon SP, et al. Expression of the fructose transporter GLUT5 in human breast cancer. Proc. Natl. Acad. Sci. USA 93: 1847-1852, 1996. PubMed: 8700847
32488: Geiger T, et al. Antitumor activity of a PKC-alpha antisense oligonucleotide in combination with standard chemotherapeutic agents against various human tumors transplanted into nude mice. Anticancer

Drug Des. 13: 35-45, 1998. PubMed: 9474241
32547: Jang SI, et al. Activator protein 1 activity is involved in the regulation of the cell type-specific expression from the proximal promoter of the human profilaggrin gene. J. Biol. Chem. 271: 24105-24114, 1996. PubMed: 8798649
32568: Lee JH, et al. The proximal promoter of the human transglutaminase 3 gene. J. Biol. Chem. 271: 4561-4568, 1996. PubMed: 8626812
32582: Chang K, Pastan I. Molecular cloning of mesothelin, a differentiation antigen present on mesothelium, mesotheliomas, and ovarian cancers. Proc. Natl. Acad. Sci. USA 93: 136-140, 1996. PubMed: 8552591
32925: Zhu X, et al. Cell cycle-dependent modulation of telomerase activity in tumor cells. Proc. Natl. Acad. Sci. USA 93: 6091-6095, 1996. PubMed: 8650224
38764: Bacus SS, et al. Differentiation of cultured human breast cancer cells (AU-565 and MCF-7) associated with loss of cell surface HER-2/neu antigen. Mol. Carcinog. 3: 350-362, 1990. PubMed: 1980588

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Cell Biology

ATCC® Number: CRL-1213™ Order this Item **Price:** $399.00

Designations:	FR
Depositors:	B Smith
Biosafety Level:	1
Shipped:	frozen
Medium & Serum:	See Propagation
Growth Properties:	adherent
Organism:	Rattus norvegicus (rat)
Morphology:	fibroblast 
Source:	**Organ:** skin **Strain:** Sprague-Dawley **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.
Age:	18 days gestation
Propagation:	**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 the following components to the base medium: fetal bovine serum to a final concentration of 10%. **Temperature:** 37.0°C
Subculturing:	**Protocol:**Volumes used in this protocol are for 75 sq cm flasks; proportionally reduce or increase amount of dissociation medium for

Related
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Make a De
Frequently
Material T
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culture vessels of other sizes.

1. Remove and discard culture medium.
2. Briefly rinse the cell layer with Ca++/Mg++ free Dulbecco's phosphate-buffered saline (D-PBS) or 0.25% (w/v) Trypsin - 0.53 mM EDTA solution to remove all traces of serum which contains trypsin inhibitor.
3. Add 2.0 to 3.0 ml of Trypsin-EDTA solution to flask and observe cells under an inverted microscope until cell layer is dispersed (usually within 10 to 20 minutes).
   Note: To avoid clumping do not agitate the cells by hitting or shaking the flask while waiting for the cells to detach. Cells that are difficult to detach may be placed at 37C to facilitate dispersal.
4. Add 6.0 to 8.0 ml of complete growth medium and aspirate cells by gently pipetting.
5. Add appropriate aliquots of the cell suspension to new culture vessels.
6. Incubate cultures at 37°C.
   Subcultivation Ratio: A subcultivation ratio of 1:3 is recommended
   Medium Renewal: 2 to 3 times per week

Preservation:
Freeze medium: Complete growth medium, 95%; DMSO, 5%
Storage temperature: liquid nitrogen vapor phase

Related Products:
Cell culture tested DMSO: ATCC 4-X
recommended serum:ATCC 30-2020
0.25% (w/v) Trypsin - 0.53mM EDTA in Hank's BSS (w/o Ca++, Mg ++): ATCC 30-2101
Phosphate-buffered saline: ATCC 30-2200
Recommended medium (without the additional supplements or serum described under ATCC Medium):ATCC 30-2003

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Cell Biology

ATCC® Number:	**CRL-2192™** Order this Item	**Price:**	**$268.00**
Designations:	NR8383 [AgC11x3A, NR8383.1]		**Related**
Depositors:	RJ Helmke		NCBI Entr
Biosafety Level:	1		Cell Micro
Shipped:	frozen		Make a De
Medium & Serum:	See Propagation		Frequently
Growth Properties:	mixed, adherent and suspension		Material T
Organism:	Rattus norvegicus (rat)		Technical
Morphology:	macrophage		Related C
	PHOTO		
Source:	**Organ:** lung **Strain:** Sprague-Dawley **Disease:** normal **Cell Type:** macrophage (alveolar);		
Cellular Products:	transforming growth factor beta (TGF beta); interleukin 1 (IL-1); interleukin 6 (IL-6)		
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:** August 3, 1983		
Receptors:	Fc		
Comments:	NR8383 (normal rat, August 3, 1983) was established from normal rat alveolar macrophage cells obtained by lung lavage. The cells were cultured in the presence of gerbil lung cell conditioned		

medium for approximately 8 to 9 months.
Subsequently the requirement for exogenous growth factors was lost.
NR8383 cells were cloned and subcloned from single cells by limiting dilution, and then subcloned from soft agar three times.
The cells exhibit characteristics of macrophage cells:
Phagocytosis of zymosan and Pseudomonas aeruginosa, nonspecific esterase activity, Fc receptors, oxidative burst,IL-1, TNF beta and IL-6 secretion, and replicative response to exogenous growth factors.
The cells respond to appropriate microbial, particulate or soluble stimuli with phagocytosis and killing.
NR8383 cells respond to bleomycin by secreting latent transforming growth factor (TGF beta).
Stimulation with bleomycin also increases TGF beta mRNA expression.
These cells are sensitive to endotoxin.
LPS levels of 1 to 10 ng/ml inhibit replication by 50%.
LPS inhibition is nontoxic and reversible even after levels up to 0.001 mg/ml for extended periods.
The NR8383 cell line provides a homogenous source of highly responsive alveolar macarophages which can be used in vitro to study macrophage related activities.

Propagation:
ATCC complete growth medium: Ham's F12K medium with 2 mM L-glutamine adjusted to contain 1.5 g/L sodium bicarbonate, 85%; heat inactivated fetal bovine serum, 15%
Temperature: 37.0°C

Subculturing:
Protocol: Cultures can be maintained by transferring floating cells to additional flasks. Adherent cells may be harvested by scraping. Upon reseeding, about one half of the cells will re-attach. Cultures are most successful when set up at a floating cell concentration of 1 to 4 X 10 exp5 viable cells/ml.
Medium Renewal: Two to three times weekly

Preservation:
Freeze medium: Complete growth medium, 95%; DMSO, 5%
Storage temperature: liquid nitrogen vapor phase

Related Products:
Recommended medium (without the additional supplements or serum described under ATCC Medium):ATCC 30-2004
purified RNA:ATCC CRL-2192R

References:
22160: Hidalgo HA, et al. Pneumocystis carinii induces an oxidative burst in alveolar macrophages. Infect. Immun. 60: 1-7, 1992. PubMed: 1729174
22316: Helmke RJ, et al. A continuous alveolar macrophage cell line: comparisons with freshly derived alveolar macrophages. In Vitro Cell. Dev. Biol. 25: 44-48, 1989. PubMed: 2914814
22674: Helmke RJ, et al. From growth factor dependence to growth factor responsiveness: the genesis of an alveolar macrophage cell line. In Vitro Cell. Dev. Biol. 23: 567-574, 1987. PubMed: 3497918
22848: Limper AH, Standing JE. Vitronectin interacts with Candida albicans and augments organism attachment to the NR8383 macrophage cell line. Immunol. Lett. 42: 139-144, 1994. PubMed: 7534269
22970: Hidalgo HA, et al. The effects of cyclosporine and dexamethasone on an alveolar macrophage cell line (NR8383). Transplantation 53: 620-623, 1992. PubMed: 1549855
23173: Denholm EM, Rollins SM. Expression and secretion of transforming growth factor-beta by bleomycin-stimulated rat alveolar macrophages. Am. J. Physiol. 264: L36-L42, 1993. PubMed: 7679254
23190: Krieg DP, et al. Resistance of mucoid Pseudomonas aeruginosa to nonopsonic phagocytosis by alveolar macrophages in vitro. Infect. Immun. 56: 3173-3169, 1988. PubMed: 3141284
23369: Sherman MP, et al. Pyrrolidine dithiocarbamate inhibits induction of nitric oxide synthase activity in rat alveolar macrophages. Biochem. Biophys. Res. Commun. 191: 1301-1308, 1993. PubMed: 7682068
23484: Griscavage JM, et al. Inducible nitric oxide synthase from a rat alveolar macrophage cell line is inhibited by nitric oxide. J. Immunol. 151: 6329-6337, 1993. PubMed: 7504017
23566: Henderson SA, et al. Nitric oxide reduces early growth response-1 gene expression in rat lung macrophages treated with interferon-gamma and lipopolysaccharide. J. Biol. Chem. 269: 25239-25242, 1994. PubMed: 7523382
36466: Huang S, et al. Rat KC cDNA cloning and mRNA expression in lung macrophages and fibroblasts. Biochem. Biophys. Res. Commun. 184: 922-929, 1992. PubMed: 1374243

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Cell Biology

ATCC® Number: TIB-71™ Order this Item
Designations: RAW 264.7
Depositors: WC Raschke
Biosafety Level: 2
Shipped: frozen
Medium & Serum: See Propagation
Growth Properties: adherent
Organism: *Mus musculus* (mouse)
Morphology: monocyte/macrophage
PHOTO
Source: **Tissue:** ascites
Strain: BALB/c
Disease: Abelson murine leukemia virus-induced tumor
Cell Type: macrophage; Abelson murine leukemia virus transformed
Cellular Products: lysozyme [1207]
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: Biological response [92560]
transfection host (Roche FuGENE® Transfection Reagents)
Receptors: complement (C3) [1207]
Antigen Expression: H-2d
Age: adult
Gender: male
Comments: This line was established from a tumor induced by Abelson murine leukemia virus. They are negative for surface immunoglobulin (sIg-), Ia (Ia-) and Thy-1.2 (Thy-1.2)This line does not secrete detectable virus particles and is negative in the XC plaque formation assay. The cells will pinocytose neutral red and will phagocytose latex beads and zymosan. They are capable of antibody dependent lysis of sheep erythrocytes and tumor cell targets. LPS or PPD treatment for 2 days stimulates lysis of erythrocytes but not tumor cell targets.Data communicated in Feb. 2007 by Dr Janet W. Hartley, indicates the expression of infectious ecotropic MuLV closely related, if not identical, to the Moloney MuLV helper virus used in the original virus inoculum. The cells also express polytropic MuLV, unsurprisingly based on the mouse passage history of the virus stocks [PubMed 18177500].

Price: $264.00

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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: fetal bovine serum to a final concentration of 10%. **Atmosphere:** air, 95%; carbon dioxide (CO2), 5% **Temperature:** 37.0°C
Subculturing:	**Protocol:** Subcultures are prepared by scraping. For a 75 cm2 flask, remove all but 10 ml culture medium (adjust amount accordingly for other culture vessels). Dislodge cells from the flask substrate with a cell scraper; aspirate and add appropriate aliquots of the cell suspension into new culture vessels. **Subcultivation Ratio:** A subcultivation ratio of 1:3 to 1:6 is recommended **Medium Renewal:** Replace or add medium every 2 to 3 days.
Preservation:	**Freeze medium:** Complete growth medium supplemented with 5% (v/v) DMSO **Storage temperature:** liquid nitrogen vapor phase
Related Products:	recommended serum:ATCC 30-2020 Recommended medium (without the additional supplements or serum described under ATCC Medium):ATCC 30-2002
References:	1135: Ralph P, Nakoinz I. Antibody-dependent killing of erythrocyte and tumor targets by macrophage-related cell lines: enhancement by PPD and LPS. J. Immunol. 119: 950-954, 1977. PubMed: 894031 1207: Raschke WC, et al. Functional macrophage cell lines transformed by Abelson leukemia virus. Cell 15: 261-267, 1978. PubMed: 212198 32443: Denlinger LC, et al. Regulation of inducible nitric oxide synthase expression by macrophage purinoreceptors and calcium. J. Biol. Chem. 271: 337-342, 1996. PubMed: 8550583 32466: Hambleton J, et al. Activation of c-Jun N-terminal kinase in bacterial lipopolysaccharide-stimulated macrophages. Proc. Natl. Acad. Sci. USA 93: 2774-2778, 1996. PubMed: 8610116 32553: Taylor GA, et al. Identification of anovel GTPase, the inducibly expresed GTPase, that accumulates in response to interferon gamma. J. Biol. Chem. 271: 20399-20405, 1996. PubMed: 8702776 32901: Li YM, et al. Molecular identity and cellular distribution of advanced glycation endproduct receptors: relationship of p60 to OST-48 and p90 to 80K-H membrane proteins. Proc. Natl. Acad. Sci. USA 93: 11047-11052, 1996. PubMed: 8855306 33046: Panneerselvam K, Freeze HH. Mannose enters mammalian cells using a specific transporter that is insensitive to glucose. J. Biol. Chem. 271: 9417-9421, 1996. PubMed: 8621609 33076: Lokuta MA, et al. Mechanisms of murine RANTES chemokine gene induction by newcatle disease virus. J. Biol. Chem. 271: 13731-13738, 1996. PubMed: 8662652 33162: Taylor MF, et al. In vitro efficacy of morpholino-modified antisense oligomers directed against tumor necrosis factor-alpha mRNA. J. Biol. Chem. 271: 17445-17452, 1996. PubMed: 8663413 92560: Standard Practice for Testing for Biological Responses to Particles in Vitro. West Conshohocken, PA:ASTM International;ASTM Standard Test Method F 1903-98R03.

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THE UNIVERSITY OF WESTERN ONTARIO
BIOHAZARDOUS AGENTS REGISTRY FORM
Revised Biohazards Subcommittee: January, 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 Dr. Eva Turley
SIGNATURE
DEPARTMENT CRL, LRCP
ADDRESS 800 Commissioner Rd. East.
PHONE NUMBER 519-686-8500
EMAIL Eva.Turley@LHSC.on.ca

Location of experimental work to be carried out: Building(s) A4-8 (TC) Room(s) A4-931

*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 Roberts Research Institute, University Biosafety Committee members can also sign as the Safety Officer.

TITLE OF GRANT(S):
1. Use of HA-metal nanoparticles to identify and characterize tumor progenitor cell subsets in breast tumors.
2. The role of RHAMM in Wound Repair.

PLEASE ATTACH A BRIEF DESCRIPTION OF YOUR WORK, SUCH A THE RESEARCH GRANT SUMMARY(S) THAT EXPLAINS THE BIOHAZARDS USED. PROJECTS SUBMITTED WITHOUT A SUMMARY WILL NOT BE REVIEWED.

FUNDING AGENCY/AGENCIES Dept of Defense/CDMRP / (CORE) LRCP./CIHR/LHRI

Names of all personnel working under Principal Investigators supervision in this location:
i) Jenny Ma
ii) Jina Zhang
iii) Yuan Qi
iv) Colleen Biggs
v)

*** 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?
E. Coli - alpha V	☑ Yes ☐ No	☑ Yes ☐ No	☑ Yes ☐ No	0.5L @ 0.70.D.
Retrovirus	☐ Yes ☑ No	☑ Yes only cats ☐ No	☑ Yes ☐ No	10ml
Moloney Murine Leukemia Virus	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	
	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	

1.3 For above named organism(s) or biological agent(s) circle HC or CFIA Containment Level required. 1 (2) 3

1.4 Source of microrganism(s) or biological agent(s)? Invitrogen

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 (ie. 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	Mouse Fibroblast Cells
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	Human Prostat. Stem Cells	Lab in US (McCaf
Rodent	☑ Yes ☐ No	Mouse Fibroblastic Cells	Our Mice
Non-human primate	☐ Yes ☐ No	Phoenix (packaging cell line)	Nolan Lab
Other (specify)	☐ Yes ☐ No		

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

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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 if the following will be used in the laboratory:
- Human blood (whole) or other body fluids: YES NO If YES Specify: Tissue Biopsy
- Human blood (fraction) or other body fluids: YES NO If YES Specify: _____
- Human organs (unpreserved): YES NO If YES Specify: _____
- Human tissues (unpreserved): YES NO If YES Specify: _____

3.3 Is human source known to be infected with and infectious agent: YES NO
If YES please name infectious agent: _____

3.4 For above named materials circle the BioCERA containment level required: 1 2 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? YES NO
If no please proceed to Section 5.0

4.2 Will genetic sequences from the following be involved:
- HIV: YES NO
If YES Specify: _____
- HTLV-1 or 2 or genes from any CDC Class 4 pathogens: YES NO
If YES Specify: _____
- Other human or animal pathogen and or their toxins: YES NO
If YES Specify: Retroviruses : Moloney Murine Leukemia Virus

4.3 Will intact genetic sequences be used from:
- SV40 Large T antigen: YES NO If YES Specify: _____
- Known oncogenes: YES NO If YES Specify: RAS, MEK1

4.4 Will live vector(s) (viral or bacterial) be used for gene transduction: YES NO
If YES Name virus: retrovirus

4.5 Is specific vector(s) to be used: Babe

4.6 Will virus be replication defective: YES NO

4.7 Will virus be infectious to humans or animals? (only cells) YES NO

4.8 Will this be expected to increase the Containment Level required: YES 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? ☐ 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? ☐ 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? ☐ YES ☐ NO

6.0 Animal Experiments

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

6.2 Name of animal species to be used _____

6.3 AUS protocol # _____

6.4 If using murine cell lines, have they been tested for murine pathogens? ☐ YES ☐ NO

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 ☐ YES ☑ NO
- Pound source cats ☐ YES ☑ NO
- Sheep or goats ☐ YES ☑ NO
- Non-Human Primates ☐ YES ☑ NO If YES specify species _____
- Wild caught animals ☐ YES ☑ NO If YES specify species _____
  colony # _____

8.0 Biological Toxins

8.1 Will toxins of biological origin be used? ☐ 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 _____

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

9.0 Import Requirements

9.1 Will the agent be imported? ☐ 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? ☐ YES ☐ NO

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

9.4 Has the import permit been sent to OHS? ☐ YES ☐ 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

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 8.0 have been trained.

SIGNATURE _____

11.0 Containment Levels

11.1 For the work described in sections 1.0 to 9.0, please circle the highest HC or CFIA Containment Level required. 1 (2) 3

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

11.3 If yes, please give the date and permit number: April 24, 2008 (JE)

12.0 Approvals

UWO Biohazard Subcommittee O.M. Kalder 19 June '08

Signature _____ Date Jun 18, 2008.

Safety Officer for Institution where experiments will take place

Signature _____ Date April 24, 2008

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

Signature _____ Date June 18/08

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