Data Sheet

BCRJ Code:	0121
Cell Line:	J774A.1
Species:	Mus musculus
Vulgar Name:	Mouse; Balb/C
Tissue:	Blood
Cell Type:	Monocyte; Macrophage
Morphology:	Macrophage
Disease:	Reticulum Cell Sarcoma
Growth Properties:	Mostly Adherent
Sex:	Female
Applications:	Biological response transfection host
Products:	Interleukin 1 (IL-1), lysozyme; IL5
Biosafety:	1
Addtional Info:	J774A.1 cells are active in antibody dependent phagocytosis [Pubmed: 1101071]. Their growth is inhibited by dextran sulfate, PPD and LPS [Pubmed: 318922]. They synthesize large amounts of lysozyme and exhibits minor cytolysis but predominantly antibody-dependent phagocytosis. Interleukin 1 beta (Il1b) is synthesized continuously by this line.
Culture Medium:	Dulbecco's Modified Eagle's Medium (DMEM) with 2 mM L-glutamine, 1.0 g/L glucose and 10% of fetal bovine serum.

Subculturing:	remove old medium, add fresh, disloge cells by scraping, and dispensse into new flasks. NOTE: For more information on enzymatic dissociation and subculturing of cell lines consult Chapter 12 in Culture of Animal Cells, a manual of Basic Technique by R. Ian Freshney, 6th edition, published by Alan R. Liss, N.Y., 2010.
Subculturing Subcultivation Ratio:	io 1:3 to 1:6 is recommended.
Culture Conditions:	Atmosphere: air, 95%; carbon dioxide (CO2), 5% Temperature: 37°C
Cryopreservation:	95% FBS + 5% DMSO (Dimethyl sulfoxide)
Thawing Frozen Cells:	SAFETY PRECAUTION: Is highly recommend that protective gloves and clothing always be used and a full face mask always be worn when handling frozen vials. It is important to note that some vials leak when submersed in liquid nitrogen and will slowly fill with liquid nitrogen. Upon thawing, the conversion of the liquid nitrogen back to its gas phase may result in the vessel exploding or blowing off its cap with dangerous force creating flying debris. 1. Thaw the vial by gentle agitation in a 37°C water bath. To reduce the possibility of contamination, keep the Oring and cap out of the water. Thawing should be rapid (approximately 2 minutes). 2. Remove the vial from the water bath as soon as the contents are thawed, and decontaminate by dipping in or spraying with 70% ethanol. All of the operations from this point on should be carried out under strict aseptic conditions. 3. For cells that are sensitive to DMSO is recommended that the cryoprotective agent be removed immediately. Transfer the vial contents to a centrifuge tube containing 9.0 mL complete culture medium and spin at approximately 125 x g for 5 to 7 minutes. 4.Discard the supernatant and Resuspend cell pellet with the recommended complete medium (see the specific batch information for the culture recommended dilution ratio). 5. Incubate the culture in a appropriate atmosphere and temperature (see "Culture Conditions" for this cell line). NOTE: It is important to avoid excessive alkalinity of the medium during recovery of the cells. It is suggested that, prior to the addition of the vial contents, the culture vessel containing the growth medium be placed into the incubator for at least 15 minutes to allow the medium to reach its normal pH (7.0 to 7.6).

References:	Ralph P, et al. Lysozyme synthesis by established human and murine histiocytic lymphoma cell lines. J. Exp. Med. 143: 1528-1533, 1976. PubMed: 1083890 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 Ralph P, Nakoinz I. Direct toxic effects of immunopotentiators on monocytic myelomonocytic, and histiocytic or macrophage tumor cells in culture. Cancer Res. 37: 546-550, 1977. PubMed: 318922 Sears DW, et al. Molecular cloning and expression of the mouse high affinity Fc receptor for IgG1. J. Immunol. 144: 371-378, 1990. PubMed: 2136886 Ralph P, et al. Reticulum cell sarcoma: an effector cell in antibody-dependent cell-mediated immunity. J. Immunol. 114: 898-905, 1975. PubMed: 1089721 Ralph P, Nakoinz I. Phagocytosis and cytolysis by a macrophage tumour and its cloned cell line. Nature 257: 393-394, 1975. PubMed: 1101071 Knowlton KU, et al. A mutation in the puff region of VP2 attenuates the myocarditic phenotype of an infectious cDNA of the woodruff variant of coxsackievirus B3. J. Virol. 70: 7811-7818, 1996. PubMed: 8892902 Schissel SL, et al. Zn2+-stimulated sphingomyelinase is secreted by many cell types and is a product of the acid sphingomyelinase gene. J. Biol. Chem. 271: 18431-18436, 1996. PubMed: 8702487 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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Cellosaurus:	CVCL_0358