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MacroCargo™ Mouse Bone Marrow-derived Macrophages (BMDM) with pDNA encoding IL-2 (Nanoparticle System, Magnetic cationic liposomes)

Cat. No.: MTS-1222-YF125

This product is for research use only and is not intended for diagnostic use.

Cell Properties

Product Overview	As a therapeutic tool, macrophage cell has a great capacity for delivering cargos be cause of their intrinsic characteristics. This product is engineered Mouse Bone Marr ow-derived Macrophages (BMDM) carried with pDNA encoding IL-2 by Nanoparticle System-Magnetic cationic liposomes. MacroCargo™ products aim to improve the ma crophage function and delivery of specific cargos. We also provide custom macroph age delivery systems based on your specific requirements.
Cell Name	Bone Marrow-derived Macrophages (BMDM)
Cell Type	Primary Cell
Cell Species	Mouse
Cell Background	The broad use of transgenic and gene-targeted mice has established bone marrow-derived macrophages (BMDM) as important mammalian host cells for investigation o f the macrophages biology.

Cargo Properties

Cargo Type	Cytokine
Specific Cargo	pDNA encoding IL-2
Cargo Common Name	IL2
Cargo Alternative Names	IL-2; TCGF; lymphokine
Cargo Full Name	Interleukin 2
Introduction	This gene is a member of the interleukin 2 (IL2) cytokine subfamily which includes I L4, IL7, IL9, IL15, IL21, erythropoietin, and thrombopoietin. The protein encoded by this gene is a secreted cytokine produced by activated CD4+ and CD8+ T lymphocyt es, that is important for the proliferation of T and B lymphocytes. The receptor of thi s cytokine (IL2R) is a heterotrimeric protein complex whose gamma chain is also sh ared by IL4 and IL7. The expression of this gene in mature thymocytes is monoalleli c, which represents an unusual regulatory mode for controlling the precise expressi on of a single gene. The targeted disruption of a similar gene in mice leads to ulcer

	ative colitis-like disease, which suggests an essential role of this gene in the immune response to antigenic stimuli.
UniprotID	P60568
GeneID	3558
Cargo Delivery System Type	Nanoparticle System
Cargo Delivery Approach	Magnetic cationic liposomes
Nanoparticle Component	DOTAP, DSPC, cholesterol, iron oxide (II, III).

Product Properties

Applications	Improve the delivery of macrophages to tumors and its therapeutic efficacy against inflammatory diseases
Mycoplasma Testing	Negative
Sterility Testing	Negative
Shipping	Dry ice
Storage	Frozen cells should be stored in a liquid nitrogen tank (-150°C~-190°C) for long term.
Handling Notes	Frozen cells should be thawed immediately upon receipt and grown according to handling procedure to ensure cell viability and proper assay performance.Note: Do not freeze the cells upon receipt as it may result in irreversible damage to the cell line. Disclaimer: We cannot guarantee cell viability if the cells are not thawed immediately upon receipt and grown according to handling procedure.
Restriction	Research use only