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MacroCargo™ Mouse Bone Marrow-derived Macrophages (BMDM) with pDNA encoding IL-10 (Nanoparticle System, Magnetic cationic liposomes)

Cat. No.: MTS-1222-YF124

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-10 by Nanoparticl e System-Magnetic cationic liposomes. MacroCargo™ products aim to improve the macrophage function and delivery of specific cargos. We also provide custom macro phage 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-10
Cargo Common Name	IL10
Cargo Alternative Names	CSIF; TGIF; GVHDS; IL-10; IL10A
Cargo Full Name	Interleukin 10
Introduction	The protein encoded by this gene is a cytokine produced primarily by monocytes an d to a lesser extent by lymphocytes. This cytokine has pleiotropic effects in immuno regulation and inflammation. It down-regulates the expression of Th1 cytokines, MH C class II Ags, and costimulatory molecules on macrophages. It also enhances B cel l survival, proliferation, and antibody production. This cytokine can block NF-kappa B activity, and is involved in the regulation of the JAK-STAT signaling pathway. Kno ckout studies in mice suggested the function of this cytokine as an essential immun

	oregulator in the intestinal tract. Mutations in this gene are associated with an increased susceptibility to HIV-1 infection and rheumatoid arthritis.
UniprotID	P22301
GeneID	3586
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