

MacroCargo™ Human Monocyte-derived Macrophages (MDMs) with IL-1α (Viral System, Lentivirus)

Cat. No.: MTS-1122-YF326

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 because of their intrinsic characteristics. This product is engineered Human Monocyte-derived Macrophages (MDMs) carried with IL-1α by Viral System-Lentivirus. MacroCargo™ products aim to improve the macrophage function and delivery of specific cargos. We also provide custom macrophage delivery systems based on your specific requirements.
Cell Name	Monocyte-derived Macrophages (MDMs)
Cell Type	Primary Cell
Cell Species	Human
Cell Background	The culture of human monocyte-derived macrophages (MDMs) represents a tool to study macrophages, with monocytes known to give rise to tissue macrophages influenced by certain environmental cues.

Cargo Properties

Cargo Type	Cytokine
Specific Cargo	IL-1α
Cargo Common Name	IL1A
Cargo Alternative Names	IL1; IL-1A; IL1F1; IL1-ALPHA; IL-1 alpha
Cargo Full Name	Interleukin 1 alpha
Introduction	The protein encoded by this gene is a member of the interleukin 1 cytokine family. This cytokine is a pleiotropic cytokine involved in various immune responses, inflammatory processes, and hematopoiesis. This cytokine is produced by monocytes and macrophages as a proprotein, which is proteolytically processed and released in response to cell injury, and thus induces apoptosis. This gene and eight other interleukin 1 family genes form a cytokine gene cluster on chromosome 2. It has been suggested that the polymorphism of these genes is associated with rheumatoid arthritis and Alzheimer's disease.

UniprotID	P01583
GeneID	3552
Cargo Delivery System Type	Viral System
Cargo Delivery Approach	Lentivirus

Product Properties

Applications	Positive regulator of M1 polarization of macrophage; Improve survive
References	Brom, Victoria C., et al. "The role of immune checkpoint molecules on macrophages in cancer, infection, and autoimmune pathologies." <i>Frontiers in Immunology</i> 13 (2022): 837645. Distributed under Open Access license CC BY 4.0 , without modification.
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