

MacroCargo™ Human PBMC-derived Macrophages with CXCL8 (Viral System, Lentivirus)

Cat. No.: MTS-1122-YF293

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 PBMC-derived Macrophages carried with CXCL8 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	PBMC-derived Macrophages
Cell Type	Primary Cell
Cell Species	Human
Cell Background	Macrophages are specialised cells involved in the detection, phagocytosis and destruction of bacteria and other harmful organisms. In addition, they can also present antigens to T cells and initiate inflammation by releasing molecules (known as cytokines) that activate other cells. Furthermore, macrophages are able to cross the biological barriers, penetrate into tumors, and accumulate particularly in hypoxic and poorly vascularized portions of a tumor.

Cargo Properties

Cargo Type	Cytokine
Specific Cargo	CXCL8
Cargo Common Name	CXCL8
Cargo Alternative Names	TL6; AITRL; GITRL; TNLG2A; hGITRL
Cargo Full Name	C-X-C motif chemokine ligand 8
Introduction	The protein encoded by this gene is a member of the CXC chemokine family and is a major mediator of the inflammatory response. The encoded protein is commonly referred to as interleukin-8 (IL-8). IL-8 is secreted by mononuclear macrophages, neutrophils, eosinophils, T lymphocytes, epithelial cells, and fibroblasts. It functions as a chemotactic factor by guiding the neutrophils to the site of infection. Bacterial and viral products rapidly induce IL-8 expression. IL-8 also participates with other cyt

okines in the proinflammatory signaling cascade and plays a role in systemic inflammatory response syndrome (SIRS). This gene is believed to play a role in the pathogenesis of the lower respiratory tract infection bronchiolitis, a common respiratory tract disease caused by the respiratory syncytial virus (RSV). The overproduction of this proinflammatory protein is thought to cause the lung inflammation associated with cystic fibrosis. This proinflammatory protein is also suspected of playing a role in coronary artery disease and endothelial dysfunction. This protein is also secreted by tumor cells and promotes tumor migration, invasion, angiogenesis and metastasis. This chemokine is also a potent angiogenic factor. The binding of IL-8 to one of its receptors (IL-8RB/CXCR2) increases the permeability of blood vessels and increasing levels of IL-8 are positively correlated with increased severity of multiple disease outcomes (eg, sepsis). This gene and other members of the CXC chemokine gene family form a gene cluster in a region of chromosome 4q.

UniprotID	P10145
GeneID	3576
Cargo Delivery System Type	Viral System
Cargo Delivery Approach	Lentivirus

Product Properties

Applications	Positive regulator of M1 polarization of macrophage; Improve survival
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