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MacroCargo™ Human PBMC-derived Monocytes with CYP2B6 (Viral System, Adenovirus)

Cat. No.: MTS-1222-YF490

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 Monocytes carried with CYP2B6 by Viral System-Adenovirus. 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 Monocytes
Cell Type	Primary Cell
Cell Species	Human
Cell Background	Monocytes express various receptors, which monitor and sense environmental changes. Monocytes are highly plastic and heterogeneous, and change their functional phenotype in response to environmental stimulation. Evidence from murine and human studies has suggested that monocytosis can be an indicator of various inflammatory diseases. Monocytes can differentiate into inflammatory or anti-inflammatory subsets. Upon tissue damage or infection, monocytes are rapidly recruited to the tissue, where they can differentiate into tissue macrophages or dendritic cells.

Cargo Properties

Cargo Type	Protein
Specific Cargo	CYP2B6
Cargo Common Name	CYP2B6
Cargo Alternative Names	CPB6; EFVM; IIB1; P450; CYP2B; CYP2B7; CYP2B7P; CYPIIB6
Cargo Full Name	Cytochrome P450 family 2 subfamily B member 6
Introduction	This gene, CYP2B6, encodes a member of the cytochrome P450 superfamily of enzymes. The cytochrome P450 proteins are monooxygenases which catalyze many reactions involved in drug metabolism and synthesis of cholesterol, steroids and other lipids. This protein localizes to the endoplasmic reticulum and its expression is induced by phenobarbital. The enzyme is known to metabolize some xenobiotics, such as

	the anti-cancer drugs cyclophosphamide and ifosphamide. Transcript variants for thi s gene have been described; however, it has not been resolved whether these trans cripts are in fact produced by this gene or by a closely related pseudogene, CYP2B 7. Both the gene and the pseudogene are located in the middle of a CYP2A pseudo gene found in a large cluster of cytochrome P450 genes from the CYP2A, CYP2B an d CYP2F subfamilies on chromosome 19q.
UniprotID	P20813
GeneID	1555
Cargo Delivery System Typ e	Viral System
Cargo Delivery Approach	Adenovirus

Product Properties

Applications	Enhance chemotherapeutic drugs delivery to hypoxic tumor tissue
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 ter m.
Handling Notes	Frozen cells should be thawed immediately upon receipt and grown according to ha ndling 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 immediatel y upon receipt and grown according to handling procedure.
Restriction	Research use only