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MacroCargo™ Mouse Bone Marrow-derived Macrophages (BMDM) with B7-H4 gRNA (Viral System, lentivirus)

Cat. No.: MTS-1122-YF346

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 B7-H4 gRNA by Viral System-lentivir us. MacroCargo™ products aim to improve the macrophage function and delivery of specific cargos. We also provide custom macrophage delivery systems based on yo ur 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	CRISPR KO
Specific Cargo	B7-H4 gRNA
Target Common Name	VTCN1
Target Alternative Names	B7X; B7H4; B7S1; B7-H4; B7h.5; VCTN1; PRO1291
Target Full Name	V-set domain containing T cell activation inhibitor 1
Introduction	This gene encodes a protein belonging to the B7 costimulatory protein family. Protei ns in this family are present on the surface of antigen-presenting cells and interact with ligand bound to receptors on the surface of T cells. Studies have shown that hi gh levels of the encoded protein has been correlated with tumor progression. A pse udogene of this gene is located on chromosome 20. Multiple transcript variants enc oding different isoforms have been found for this gene.
UniprotID	Q7Z7D3

GeneID	79679
Cargo Delivery System Type	Viral System
Cargo Delivery Approach	Lentivirus

Product Properties

Applications	Prevent cancer cells from evading immune clearance
References	Brom, Victoria C., et al. "The role of immune checkpoint molecules on macrophages in cancer, infection, and autoimmune pathologies." *Frontiers in Immunology* 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