

## MacroCargo™ Mouse Bone Marrow-derived Macrophages (BMDM) with CD40 (Viral System, Lentivirus)

Cat. No.: MTS-1122-YF362

**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 Mouse Bone Marrow-derived Macrophages (BMDM) carried with CD40 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	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 of the macrophages biology.

### Cargo Properties

Cargo Type	Protein
Specific Cargo	CD40
Cargo Common Name	CD40
Cargo Alternative Names	p50; Bp50; CDW40; TNFRSF5
Cargo Full Name	CD40 molecule

**Introduction** This gene is a member of the TNF-receptor superfamily. The encoded protein is a receptor on antigen-presenting cells of the immune system and is essential for mediating a broad variety of immune and inflammatory responses including T cell-dependent immunoglobulin class switching, memory B cell development, and germinal center formation. AT-hook transcription factor AKNA is reported to coordinately regulate the expression of this receptor and its ligand, which may be important for homotypic cell interactions. Adaptor protein TNFR2 interacts with this receptor and serves as a mediator of the signal transduction. The interaction of this receptor and its ligand is fou

nd to be necessary for amyloid-beta-induced microglial activation, and thus is thought to be an early event in Alzheimer disease pathogenesis. Mutations affecting this gene are the cause of autosomal recessive hyper-IgM immunodeficiency type 3 (HIGM3). Multiple alternatively spliced transcript variants of this gene encoding distinct isoforms have been reported.

---

UniprotID [P29965](#)

---

GeneID [959](#)

---

Cargo Delivery System Type Viral System

---

Cargo Delivery Approach Lentivirus

---

## Product Properties

---

Applications Promote bactericidal and tumoricidal activity of macrophages

---

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

---