

Primary Mouse Bone Marrow-Derived Macrophage Cells (BMDM)

SKU: CDS11910 | Category: Primary Cells — Mouse

Validation & Biomarker Data Guide · Lineage classification: Monocyte / macrophage

1. Product Overview

Primary Mouse Bone Marrow-Derived Macrophage Cells (BMDM) is a primary cell product from mouse Bone marrow for physiologically relevant in vitro studies. The product is particularly relevant to Skeletal cell series and Circulatory system research. It can support research in cell physiology, signaling, metabolism, toxicology, drug response and cell-based assay development where a primary-cell model is preferred. Culture and passage conditions should follow the product-specific protocol. For research use only.

Primary tissue / source: Bone marrow | Growth type: Adherent Cells | Tumorigenic status: Normal Cells | Pack size: 1 x 0.5 million cells

2. Typical Applications

- Skeletal cell series
- Circulatory system
- Macrophages

3. Identity & Phenotypic Marker Panel

A representative identity panel for monocyte / macrophage products is shown below. Actual per-lot Certificates of Analysis should be consulted for verified identity data.

Marker	Expected Result	Range
CD14	Positive	75–97% positive
CD68	Positive	70–95% positive
CD11b	Positive	70–95% positive
CD3	Negative / low	≤5% (background)
CD19	Negative / low	≤4% (background)

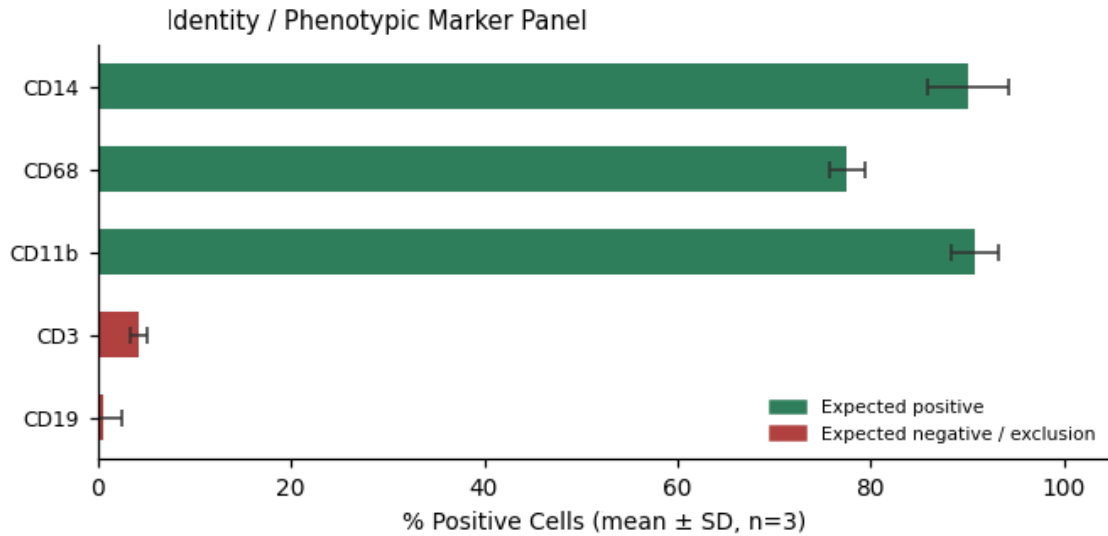


Figure 1. Marker expression profile (mean ± SD, n = 3 replicates).

4. Growth Kinetics & Viability

Growth and viability trends over 120 hours in standard culture conditions.

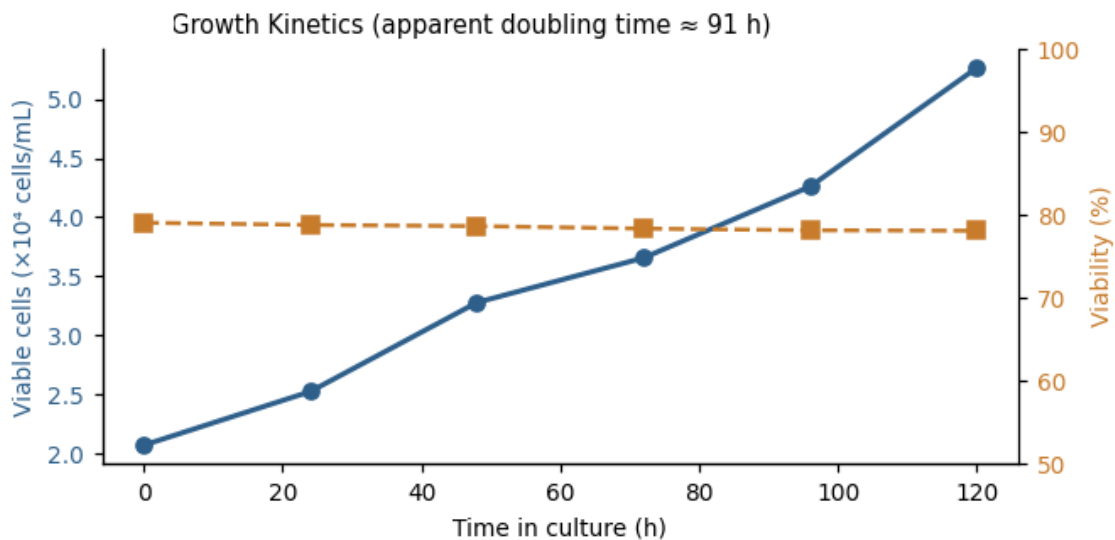


Figure 2. Growth curve (viable cell density, left axis) and viability trend (right axis).

5. Functional Validation Assay

Phagocytosis assay: Uptake of fluorescently labeled latex beads or bioparticles quantified by flow cytometry/imaging to confirm phagocytic competence; LPS-stimulated TNF-α/IL-6 secretion by ELISA.

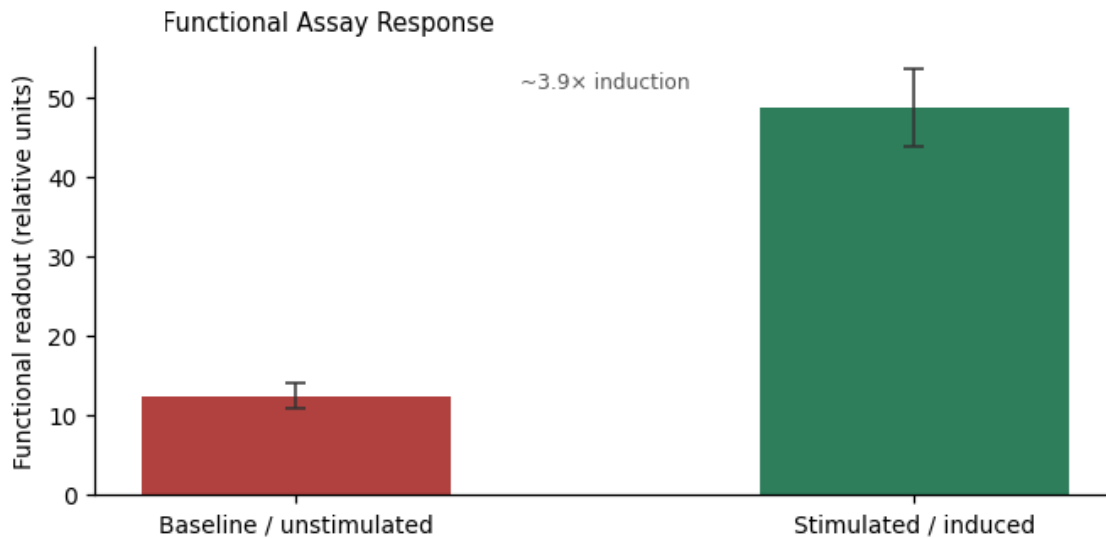


Figure 3. Functional assay readout — ~3.9x induction over baseline.

6. QC Acceptance Criteria

Acceptance Criterion	Result
≥70% CD14+/CD68+ by flow cytometry or IHC	PASS
Positive phagocytic uptake (>60% bead-positive cells)	PASS
Apparent population doubling time	≈ 91 hours
Functional assay outcome	~3.9x induction over baseline

7. Handling & Culture Notes

- Refer to the product-specific Certificate of Analysis and datasheet for validated culture medium, seeding density, and passaging recommendations.
- As with any primary cell or cell line, confirm mycoplasma-negative status, expected morphology by phase-contrast microscopy, and viability by trypan blue or equivalent dye-exclusion assay at each passage before use in downstream assays.