

Primary Rat Peripheral Blood Mononuclear Cells (PBMC)

SKU: CDS11343 | Category: Primary Cells — Rat

Validation & Biomarker Data Guide · Lineage classification: PBMC (mixed leukocyte population)

1. Product Overview

Primary Rat Peripheral Blood Mononuclear Cells (PBMC) is a primary cell product from rat Peripheral blood for physiologically relevant in vitro studies. The product is particularly relevant to Circulatory system and Mononuclear cells 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: Peripheral blood | Growth type: Suspension Cells | Tumorigenic status: Normal Cells | Pack size: 1 x 0.5 million cells

2. Typical Applications

- Circulatory system
- Mononuclear cells

3. Identity & Phenotypic Marker Panel

A representative identity panel for pbmc (mixed leukocyte population) products is shown below. Actual per-lot Certificates of Analysis should be consulted for verified identity data.

Marker	Expected Result	Range
CD45	Positive	92–100% positive
CD3	Positive	55–80% positive
CD14	Positive	5–20% positive
CD19	Positive	5–20% positive
Glycophorin A	Negative / low	≤3% (background)

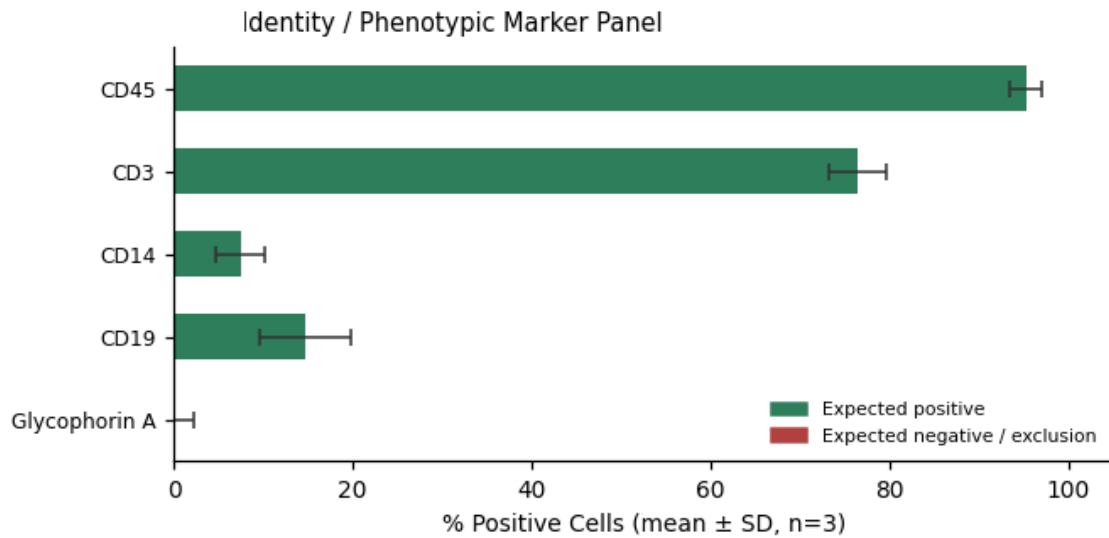


Figure 1. Marker expression profile (mean ± SD, n = 3 replicates).

4. Growth Kinetics & Viability

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

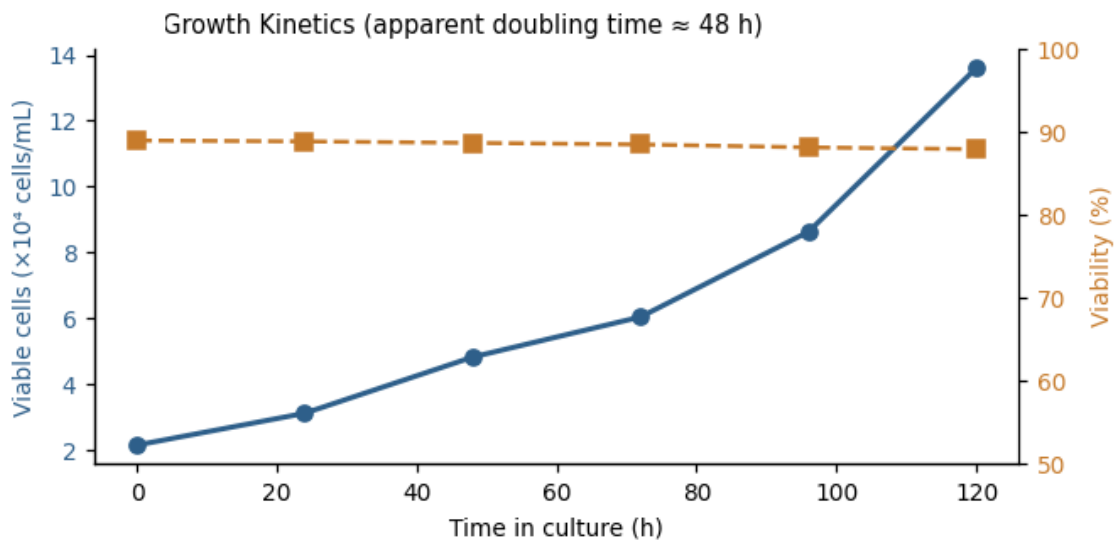


Figure 2. Growth curve (viable cell density, left axis) and viability trend (right axis).

5. Functional Validation Assay

Mitogen stimulation assay: PHA/PMA-ionomycin stimulation followed by proliferation (CFSE) and cytokine secretion (IFN- γ , IL-2, TNF- α) profiling by ELISA/multiplex.

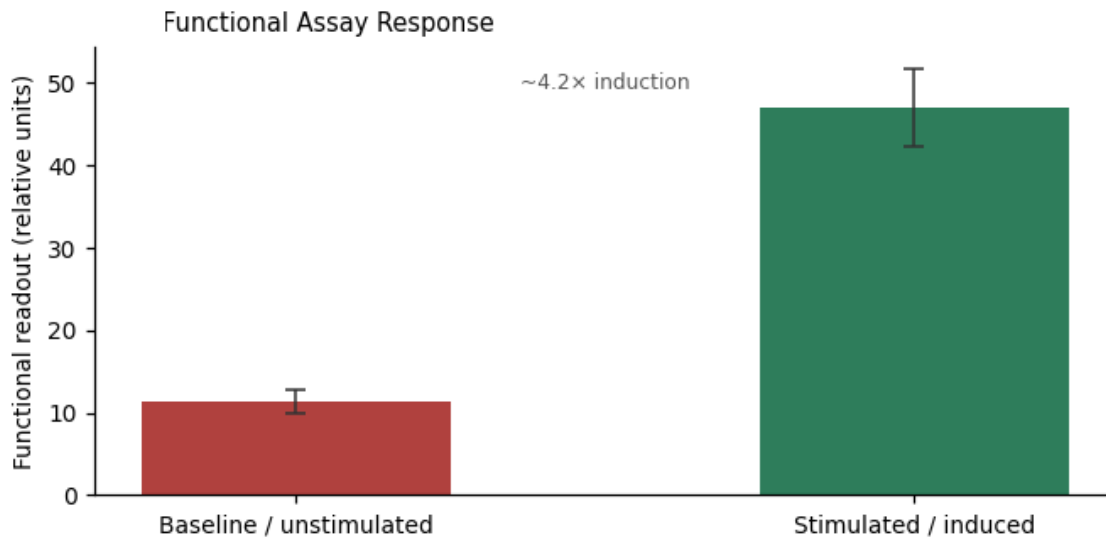


Figure 3. Functional assay readout — ~4.2× induction over baseline.

6. QC Acceptance Criteria

Acceptance Criterion	Result
≥90% CD45+ by flow cytometry	PASS
≥85% viability on thaw (7-AAD exclusion)	PASS
Balanced lymphocyte:monocyte ratio consistent with donor reference range	PASS
Apparent population doubling time	≈ 48 hours
Functional assay outcome	~4.2× 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.