Anti-Human CD16 monoclonal antibody

Product Name

Anti-Human CD16 monoclonal antibody

Size/Catalog Number

500μg / TL201-0500

Product Information

Expression system: HEK293 cells

Purity: > 90% as determined by SDS-PAGE

Endotoxin: < 0.1 EU per 1 μg of protein (LAL method)

Activity: The binding rate with PBMC is 80%–150% relative to the commercial anti-human CD16 antibody (BD, #555406) used as a positive control

Purification: Protein A sepharose affinity

Form： Liquid

Storage Buffer: 20mM Phosphate Buffer, pH 7.4 (containing 150 mM NaCl), Preservative: Human Serum Albumin

Background

The recombinant humanized anti-CD16 monoclonal antibody is a high-affinity therapeutic agent produced via HEK-293 transient transfection technology, specifically targeting the membrane-proximal epitope of FcγRIII (CD16) to structurally mimic native IgG-Fc binding patterns. This antibody activates Syk/ZAP70 kinase-dependent phosphorylation cascades, triggering intracellular calcium flux and PI3K-AKT/mTOR-MAPK signaling in NK cells, thereby amplifying antibody-dependent cellular cytotoxicity (ADCC) efficacy and inducing proinflammatory cytokine secretion (IFN-γ/TNF-α). In ex vivo NK cell expansion systems, it significantly enhances CD107a degranulation and proliferation kinetics while synergizing with IL-2/IL-15 to sustain the metabolic fitness of effector memory NK subsets (CD56dim/CD16+). Manufactured under animal component-free conditions with multi-step chromatographic purification, the product complies with release specifications through stringent control of host DNA/protein residuals and endotoxin levels, making it suitable for CAR-NK engineering, bispecific immune cell therapy platforms, and tumor vaccine adjuvant development.

Stability & Storage

Stable for up to 24 months when stored at 2-8°C under sterile condition.

References

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