Anti-Human CD16 monoclonal antibody

Product Name

Anti-Human CD16 monoclonal antibody

Size/Catalog Number

500μg / GMP-TL201-0500

Product Information

Expression system: Chinese Hamster Ovary (CHO) Cells
Purity: > 95% as determined by SDS-PAGE and HPLC
Endotoxin: < 0.01 EU per 1 μg of protein (LAL method)
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 CHO stable cells, specifically targeting the membrane-proximal epitope of FcγRIII (CD16). By precisely mimicking the spatial conformation of natural IgG-Fc binding, it activates Syk/ZAP70 kinase-dependent phosphorylation cascades, triggering calcium influx and PI3K-AKT/mTOR-MAPK signaling pathways in NK cells to enhance antibody-dependent cellular cytotoxicity (ADCC) and stimulate secretion of proinflammatory cytokines such as IFN-γ and TNF-α. In ex vivo NK cell expansion systems, this antibody significantly improves CD107a degranulation efficiency and proliferation rates while synergizing with IL-2/IL-15 to maintain metabolic adaptability of effector memory NK cell subsets (CD56dim/CD16+). Manufactured using animal component-free culture media and multi-step chromatographic purification, the product complies with release specifications through stringent controls on host DNA residuals, host protein contaminants, and endotoxin levels. It is designed for applications in CAR-NK development, bispecific antibody-engaged immune cell therapies, and tumor vaccine adjuvant systems.

Stability & Storage

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

References

1. B L Jin, J Q Guo, Y P Han, F Li, Q Zhao, W L Li, D M Zhang, H Wang, J P Zhang. Optimization of the method to cultivate NK cells from abandoned white cells. Zhonghua Zhong Liu Za Zhi. 2016 Feb;38(2):105-12.

2. Maria Michela D'Aloia, Sara Caratelli, Camilla Palumbo, Simone Battella, Roberto Arriga, Davide Lauro, Gabriella Palmieri, Giuseppe Sconocchia, Maurizio Alimandi. T lymphocytes engineered to express a CD16-chimeric antigen receptor T-cell immune response against immunoglobulin G-opsonized target cells. Cytotherapy. 2016 Feb;18(2):278-90.

3. Simone Battella, Maria Christina Cox, Angela Santoni, Gabriella Palmieri. Natural killer (NK) cells and anti-tumor therapeutic mAb: unexplored interactions. J Leukoc Biol. 2016 Jan;99(1):87-96.

Intended Us

For research and manufacturing purposes only.