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Rabbit anti-human IgG1 FC (DLE mutation) Specific Monoclonal Antibody, Clone 4B6

Catalog No.: YR0511

Basic Information

Molecular Weight
150kDa

Endotoxin
<1EU/mg (<0.001EU/μg)Determined by LAL gel clotting assay

Sterility
0.2 μm filtration

Aggregation
<5% Determined by SECP

Purity
>95% Determined by SDS-PAGE

Background

The DLE mutation (Ser239Asp/Ile332Glu/Ala330Leu) in the IgG Fc region is a crucial modification in antibody engineering designed to optimize antibody effector functions and stability. This mutation enhances the binding to FcγRIIIa by introducing additional hydrogen bonds that separate the CH2 domain of the Fc segment. Consequently, it significantly boosts antibody-dependent cell-mediated cytotoxicity (ADCC), bolstering the cytotoxic effect of natural killer (NK) cells on target cells. The Ala330Leu substitution within the DLE mutation reduces binding to complement protein C1q, thereby diminishing complement-dependent cytotoxicity (CDC) mediated by the antibody, which helps mitigate non-specific inflammatory responses. Introducing the DLE mutation into the antibody's heavy chain also markedly enhances its stability and solubility. This mutation has been successfully applied in optimizing various therapeutic antibodies, markedly improving their efficacy and stability.

Reported Applications

ELISA,SPR

Immunogen Information

Clone
4B6

Isotype
Rabbit IgG1

Immunogen

RecommendedIsotype Control(s)

Recommended Dilution Buffer
1×PBS pH 7.3

Contact

400-999-6126

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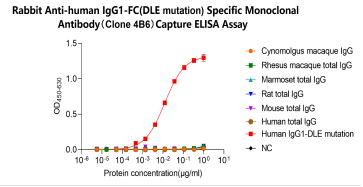
Product Information

Production
Purified from cell culture supernatant in an animal-free facility

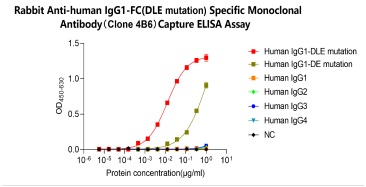
Purification
Protein A/G

Storage
Store at -20℃

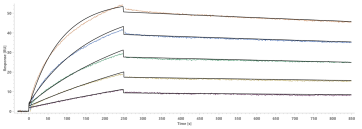
Validation Data



A microtiter plate was coated overnight with Rabbit Anti-human IgG1-FC (DLE mutation) Specific Monoclonal Antibody (Clone 4B6) at a concentration of 2 μg/mL. After washing and blocking with PBST + 5% skim milk, increasing concentrations of various biotinylated antibodies was added. Horseradish Peroxidase conjμgated Neutravidin, (Thermo Fisher, 31001) was used for final detection.



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Rabbit Anti-human IgG1-FC (DLE mutation) Specific Monoclonal Antibody (Clone 4B6) captured on Protein A Chip can bind Human IgG1-FC (DLE) mutation with an affinity constant of 0.72 nM as determined in SPR assay.