

Source

Biotinylated Monoclonal Anti-TNF-alpha Antibody, human IgG1 (16H5) is a chimeric monoclonal antibody recombinantly expressed from HEK293, which combines the variable region of a mouse monoclonal antibody with Human constant domain.

Clone

16H5

Isotype

Human IgG1 | Human Kappa

Conjugate

Biotin

Antibody Type

Recombinant Monoclonal

Reactivity

Human

Immunogen

Human TNF-alpha Protein is expressed from human 293 cells

Specificity

This product is a specific antibody specifically reacts with TNF-alpha.

Application

Application	Recommended Usage
ELISA	0.2-50 ng/mL

Purity

>95% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

Purification

Protein A purified / Protein G purified

Formulation

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

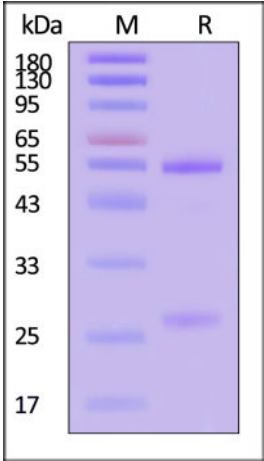
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- 20°C to -70°C for 12 months in lyophilized state;
- 70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



SEC-MALS

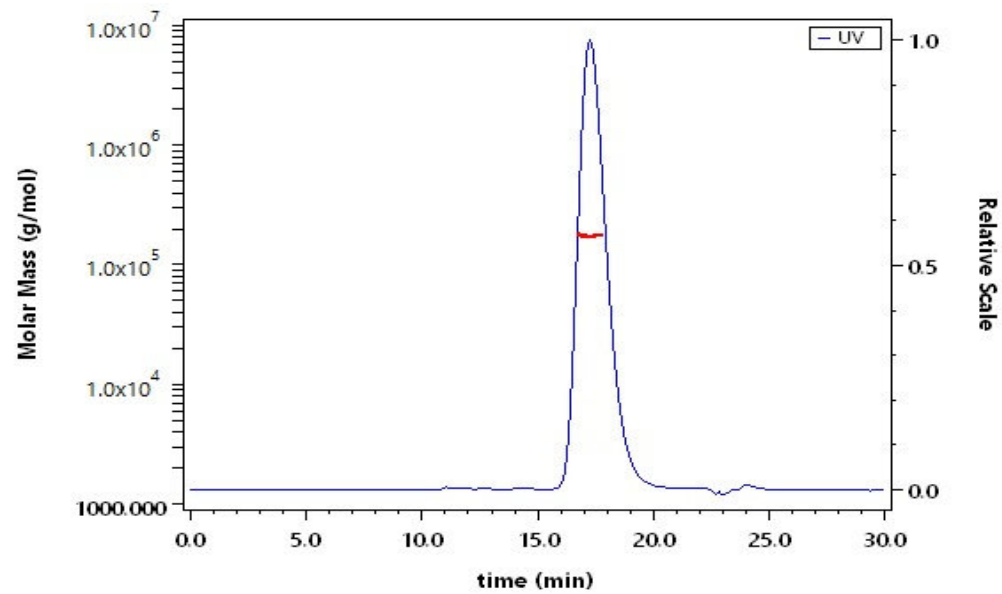


Biotinylated Monoclonal Anti-TNF-alpha Antibody, human IgG1 (16H5) (MALS verified)

Catalog # TNA-BLM494

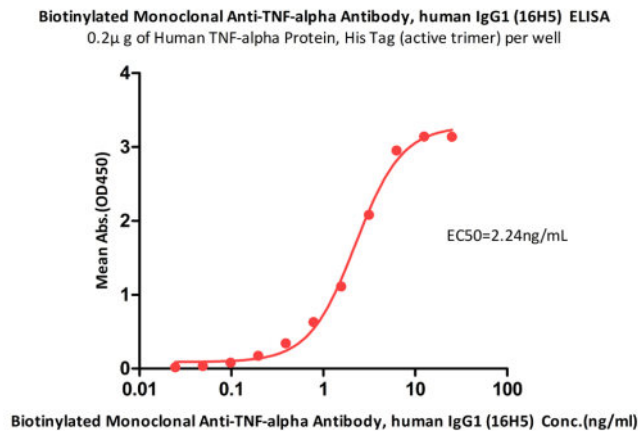


Biotinylated Monoclonal Anti-TNF-alpha Antibody, human IgG1 (16H5) on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With [Star Ribbon Pre-stained Protein Marker](#)).

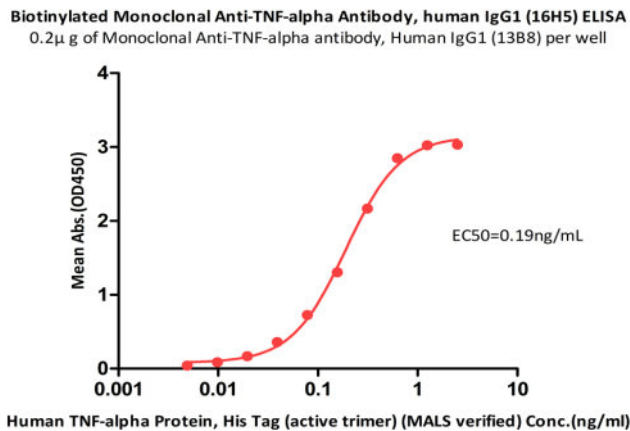


The purity of Biotinylated Monoclonal Anti-TNF-alpha Antibody, human IgG1 (16H5) (Cat. No. TNA-BLM494) is more than 90% and the molecular weight of this protein is around 135-175 kDa verified by SEC-MALS. [Report](#)

Bioactivity-ELISA

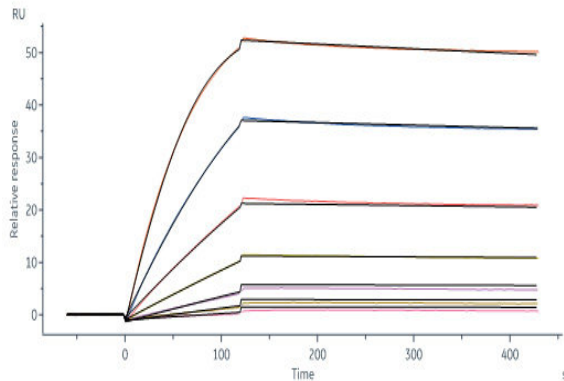


Immobilized Human TNF-alpha Protein, His Tag (Cat. No. TNA-H5228) at 2 µg/mL (100 µL/well) can bind Biotinylated Monoclonal Anti-TNF-alpha Antibody, human IgG1 (16H5) (Cat. No. TNA-BLM494) with a linear range of 0.20-3.13 ng/mL (QC tested).



Immobilized Monoclonal Anti-TNF-alpha Antibody, Human IgG1 (13B8) (Cat. No. TNA-AM493) at 2 µg/mL, add increasing concentrations of Human TNF-alpha Protein, His Tag (Cat. No. TNA-H5228), and then add Biotinylated Monoclonal Anti-TNF-alpha Antibody, human IgG1 (16H5) (Cat. No. TNA-BLM494) at 0.25 µg/mL. Detection was performed using HRP-conjugated streptavidin with sensitivity of 0.02 ng/mL (Routinely tested).

Bioactivity-SPR

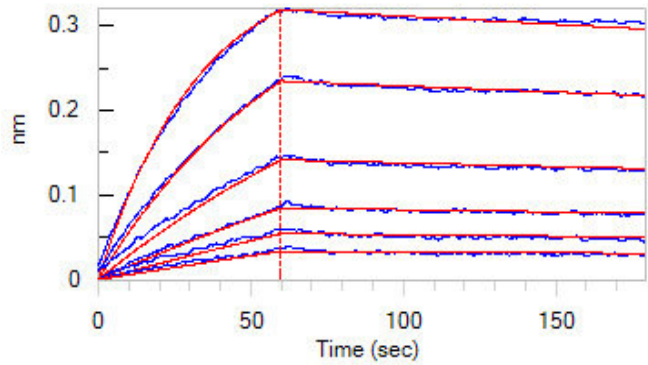


Biotinylated Monoclonal Anti-TNF-alpha Antibody, human IgG1 (16H5) (Cat. No. TNA-BLM494) captured on CM5 chip via Anti-human IgG Fc antibodies surface can bind Human TNF-alpha, His Tag (Cat. No. TNA-H5228) with an

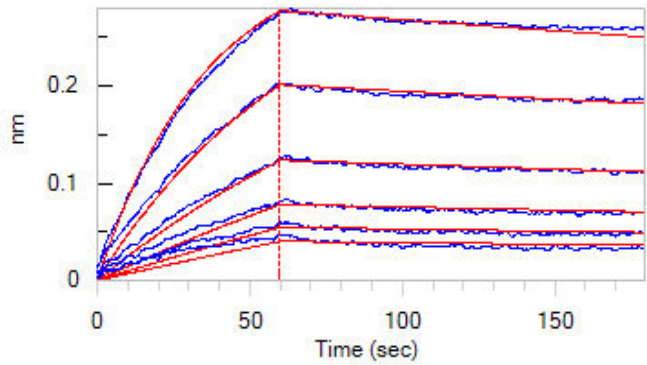


affinity constant of 75.9 pM as determined in a SPR assay (Biacore 8K)
(Routinely tested).

Bioactivity-BLI



Loaded Biotinylated Monoclonal Anti-TNF-alpha Antibody, human IgG1 (16H5) (Cat. No. TNA-BLM494) on Protein A Biosensor, can bind Human TNF-alpha, His Tag (Cat. No. TNA-H5228) with an affinity constant of 2.13 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



Loaded Biotinylated Monoclonal Anti-TNF-alpha Antibody, human IgG1 (16H5) (Cat. No. TNA-BLM494) on Protein A Biosensor, can bind Human TNF-alpha, premium grade (Cat. No. TNA-H4211) with an affinity constant of 3.16 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

Background

Tumor necrosis factor alpha (TNF α) is a cytokine produced primarily by monocytes and macrophages. It is found in synovial cells and macrophages in the tissues. The primary role of TNF α is in the regulation of immune cells. TNF α is able to induce apoptotic cell death, to induce inflammation, and to inhibit tumorigenesis and viral replication. Dysregulation of TNF α production has been implicated in a variety of human diseases, including major depression, Alzheimer's disease and cancer. Recombinant TNF α is used as an immunostimulant under the INN tasonermin. TNF α can be produced ectopically in the setting of malignancy and parallels parathyroid hormone both in causing secondary hypercalcemia and in the cancers with which excessive production is associated.

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