Datasheet for ABIN2870564

TNF alpha Protein (AA 77-233) (His tag,AVI tag,Biotin)

3 Images 3 Publications

Go to Product page

Overview

Quantity:	200 µg
Target:	TNF alpha
Protein Characteristics:	AA 77-233
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Biological Activity:	Active
Purification tag / Conjugate:	This TNF alpha protein is labelled with His tag,AVI tag,Biotin.

Product Details

Brand:	MABSol®,PrecisionAvi
Sequence:	AA 77-233
Specificity:	Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.
Characteristics:	This protein carries a polyhistidine tag at the C-terminus, followed by an Avi tag (Avitag™) The protein has a calculated MW of 19.2 kDa. The protein migrates as 21 kDa on a SDS-PAGE gel under reducing (R) condition due to glycosylation. More than 95 % of Biotinylated Human TNF-alpha (TNA-H82E3) presents as active trimers with a molecular mass of 57 kDa, as determined by SEC-HPLC analysis.
Purity:	>95 % as determined by SDS-PAGE.
Endotoxin Level:	Less than 1.0 EU per µg by the LAL method.

Target Details

Target:	TNF alpha
Alternative Name:	TNF-alpha (TNF alpha Products)
Background:	Tumor necrosis factor alpha (TNFα) is a cytokine produced primarily by monocytes and macrophages. It is found in synovial cells and macrophages in the tissues.The primary role of TNFα is in the regulation of immune cells. TNFα is able to induce apoptotic cell death, to induce inflammation, and to inhibit tumorigenesis and viral replication. Dysregulation of TNFα production has been implicated in a variety of human diseases, including major depression, Alzheimer's disease and cancer. Recombinant TNFα is used as an immunostimulant under the INN tasonermin. TNFα 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.
Molecular Weight:	20.0 kDa
NCBI Accession:	NP_000585
Pathways:	NF-kappaB Signaling, Apoptosis, Caspase Cascade in Apoptosis, TLR Signaling, Cellular Response to Molecule of Bacterial Origin, Regulation of Leukocyte Mediated Immunity, Positive Regulation of Immune Effector Process, Production of Molecular Mediator of Immune Response, Positive Regulation of Endopeptidase Activity, Hepatitis C, Protein targeting to Nucleus, Inflammasome

Application Details

Comment:	Ready-to-use AvitagTM biotinylated protein: The product is exclusively produced using the AvitagTM technology. Briefly, a unique 15 amino acid peptide, the Avi tag, is introduced into the recombinant protein during expression vector construction. The single lysine residue in the Avi tag is enzymatically biotinylated by the E. Coli biotin ligase BirA. This single-point enzymatic labeling technique brings many advantages for commonly used binding assays. The biotinylation happens on the lysine residue of Avi tag, and therefore does NOT interfere with the target protein's natural binding activities. In addition, when immobilized on an avidin-coated surface, the protein orientation is uniform because the position of the Avi tag in the protein is precisely controlled.
Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Buffer:	PBS, pH 7.4
Handling Advice:	Please avoid repeated freeze-thaw cycles.
Storage:	-20 °C

Publications

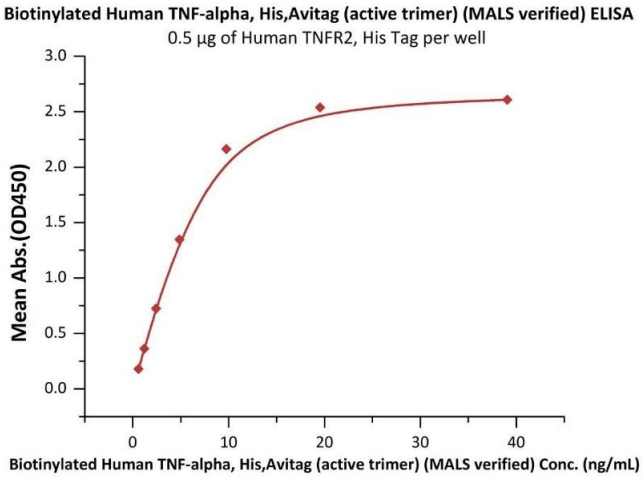
Product cited in:

Bourquard, Musnier, Puard, Tahir, Ayoub, Jullian, Boulo, Gallay, Watier, Bruneau, Reiter, Crépieux, Poupon: "MAbTope: A Method for Improved Epitope Mapping." in: **Journal of immunology (Baltimore, Md. : 1950)**, Vol. 201, Issue 10, pp. 3096-3105, (2019) (PubMed).

Ji, Cao, Zeng, Zhang, Xiao, Guan, Chen, Chen, Wang, Guo: "The N-terminal ubiquitin-associated domain of Cezanne is crucial for its function to suppress NF-κB pathway." in: **Journal of cellular biochemistry**, Vol. 119, Issue 2, pp. 1979-1991, (2018) (PubMed).

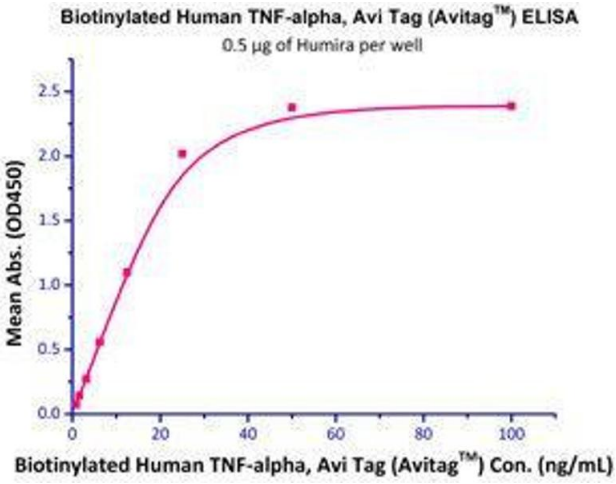
Karlsson, Fridh, Frostell: "Surrogate potency assays: Comparison of binding profiles complements dose response curves for unambiguous assessment of relative potencies." in: **Journal of pharmaceutical analysis**, Vol. 8, Issue 2, pp. 138-146, (2018) (PubMed).

Images



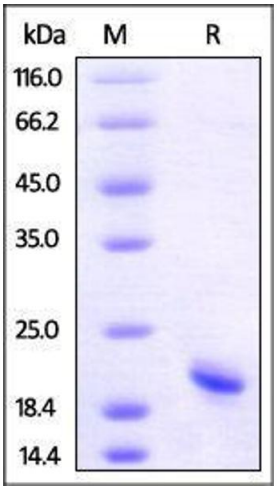
ELISA

Image 1. Immobilized Human TNFR2, His Tag (ABIN2181842,ABIN2181841) at 5 μg/mL (100 μL/well) can bind Biotinylated Human , His,Avitag (active trimer) (MALS verified) (ABIN2870564,ABIN2870565) with a linear range of 0.6-10 ng/mL (Routinely tested).



Binding Studies

Image 2. Immobilized Humira at 5 μg/mL (100 μl/well) can bind Biotinylated Human TNF-alpha with a linear range of 0.8-25 ng/mL.



SDS-PAGE

Image 3. Biotinylated Human TNF-alpha (HPLC-verified) on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.