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TNF alpha Protein (AA 77-233) (Biotin)

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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 Biotin.

Product Details

Brand:	MABSol®,UltraLys
Sequence:	AA 77-233
Specificity:	The primary amines in the side chains of lysine residues and the N-terminus of the protein are conjugated with biotins using standard chemical labeling method. A standard biotin reagent (13.5 angstroms) is used in this product.
Characteristics:	The product does NOT contain any epitope tags. The protein has a calculated MW of 17.4 kDa. The protein migrates as 18 kDa on a SDS-PAGE gel under reducing (R) condition.
Purity:	>95 % as determined by reduced SDS-PAGE.
Sterility:	0.22 µm filtered
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
	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 $TNF\alpha$
	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:	17.4 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:	A chemically labeled biotinylated protein with ultra sensitivity.
	The product is produced using a chemical labeling approach. The primary amines in the side
	chains of lysine residues and the N-terminus of protein are conjugated with biotins.
	Chemical labeling usually results in multiple biotin attachment on a single protein molecule,
	which could potentially lead to higher detection sensitivity.
Restrictions:	For Research Use only
Handling	
Format:	Lyophilized
Buffer:	PBS, pH 7.4
Handling Advice:	Please avoid repeated freeze-thaw cycles.
Storage:	-20 °C

Storage Comment:

No activity loss was observed after storage at: In lyophilized state for 1 year (4 °C), After reconstitution under sterile conditions for 3 months (-70 °C).

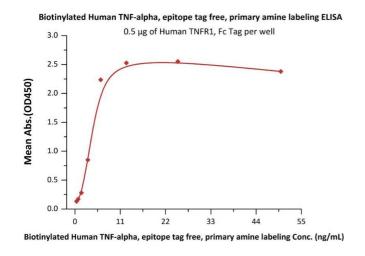
Publications

Product cited in:

Gao, Lu, Guo, Xin: "Dual-optofluidic waveguide in-line fiber biosensor for real-time label-free detection of interferon-gamma with temperature compensation." in: **Optics express**, Vol. 28, Issue 7, pp. 10491-10504, (2021) (PubMed).

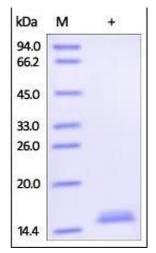
El Amrani, van den Broek, Göbel, van Maarseveen et al.: "Quantification of active infliximab in human serum with liquid chromatography-tandem mass spectrometry using a tumor necrosis factor alpha -based pre-analytical sample purification and a stable ..." in: **Journal of chromatography. A**, Vol. 1454, pp. 42-8, (2016) (PubMed).

Images



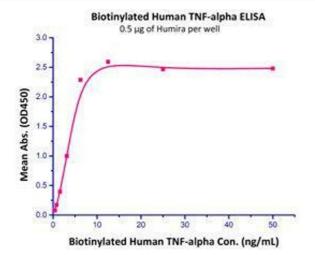
ELISA

Image 1. Immobilized Human TNFR1, Fc Tag (ABIN2181840,ABIN2181839) at $5 \mu g/mL$ (100 $\mu L/well$) can bind Biotinylated Human , epitope tag free, primary amine labeling (active trimer) (MALS verified) (ABIN2181834,ABIN2181833) with a linear range of 0.4-6 ng/mL (Routinely tested).



SDS-PAGE

Image 2. Biotinylated Human TNF-alpha on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.



Binding Studies

Image 3. Immobilized Humira at 5 μ g/mL (100 μ l/well) can bind Biotinylated Human TNF-alpha with a linear range of 0.4-3 ng/mL.