

Human TNF alpha Protein; His Tag

Product Information

Product Name Human TNF alpha Protein; His Tag

Storage temp Store at $\leq -70^{\circ}\text{C}$, stable for 6 months after receipt.
Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.

Catalog# / Size GM-88209RP-100 / 100 μg
GM-88209RP-1000 / 1 mg

Protein Information

Alternative Names DIF, TNF-alpha, TNFA, TNFSF2, TNF α

Source Human TNF alpha Protein; His Tag (GM-88209RP) is expressed from human 293 cells (HEK-293). It contains AA Val 77 - Leu 233 (Accession # P01375).
This protein carries a His tag at the C-terminus.

Purity > 95% as determined by SDS-PAGE

Endotoxin < 1 EU/ μg , determined by LAL gel clotting assay

Predicted Mol Mass 18.2 KDa

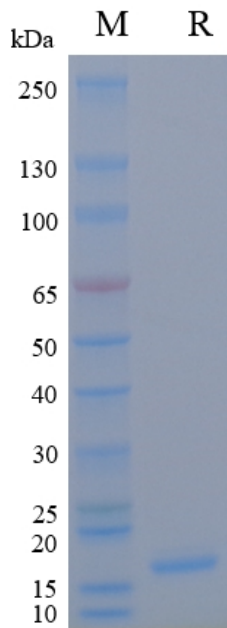
Formulation Supplied as a 0.2 μm filtered solution of PBS, pH7.2-7.4.

Description TNF- α is a key pro-inflammatory cytokine in the TNF superfamily, encoded by the TNFA (TNF) gene and commonly referred to as TNF- α or TNFSF2. It is produced by a broad range of cells, including macrophages, T cells, and other immune and non-immune cells, and exists in membrane-bound and soluble forms. TNF- α plays a central role in mediating inflammation, apoptosis, cell proliferation, and host defense, with dysregulation linked to inflammatory diseases, sepsis, and cancer.

TNF- α signals primarily through its receptors TNFR1 (p55) and TNFR2 (p75), triggering multiple pathways. TNFR1 activation commonly leads to NF- κB and MAPK signaling, promoting transcription of inflammatory genes, survival factors, and sometimes apoptosis via caspase cascades. TNFR2 mainly modulates immune cell activation and can enhance TNF- α -driven responses. Cross-talk with other cytokines shapes the intensity and duration of inflammation. Therapeutically, TNF- α inhibitors are used to treat autoimmune diseases, but neutralization must balance infection risk and immune suppression.

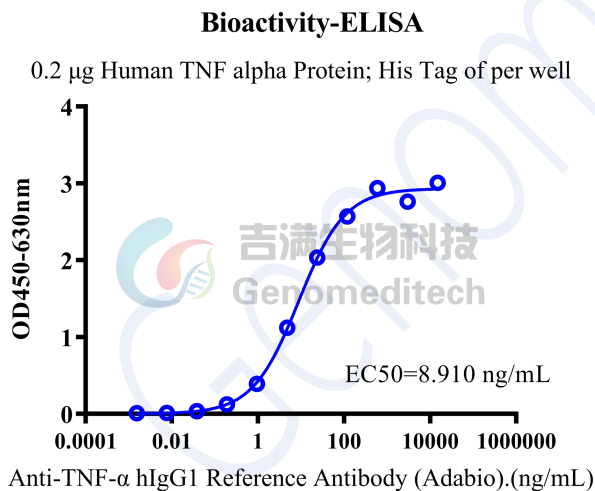
Version:4.0

SDS-PAGE

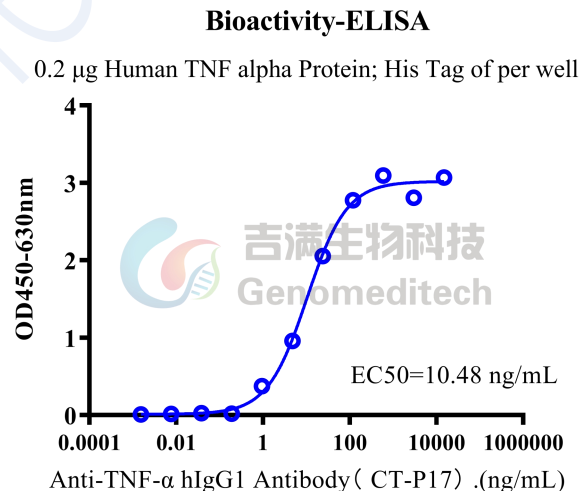


On SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

Bioactivity-ELISA



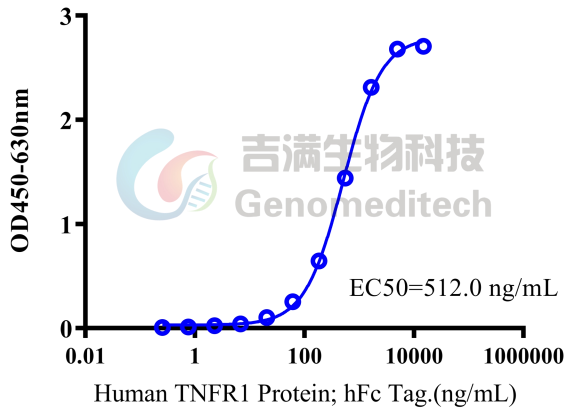
Human TNF alpha Protein; His Tag (Catalog # GM-88209RP) was immobilized at 2 $\mu\text{g}/\text{ml}$ (100 $\mu\text{L}/\text{well}$). Increasing concentrations of Anti-TNF- α hIgG1 Reference Antibody (Adabio) (Catalog # GM-87987MAB) were added.



Human TNF alpha Protein; His Tag (Catalog # GM-88209RP) was immobilized at 2 $\mu\text{g}/\text{ml}$ (100 $\mu\text{L}/\text{well}$). Increasing concentrations of Anti-TNF- α hIgG1 Antibody (CT-P17) (Catalog # GM-49267AB) were added.

Bioactivity-ELISA

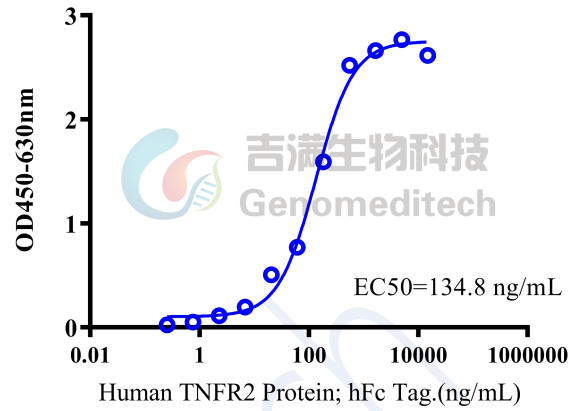
0.2 μ g Human TNF alpha Protein; His Tag of per well



Human TNF alpha Protein; His Tag (Catalog # GM-88209RP) was immobilized at 2 μ g/ml (100 μ L/well). Increasing concentrations of Human TNFR1 Protein; hFc Tag (Catalog # GM-88212RP) were added.

Bioactivity-ELISA

0.2 μ g Human TNF alpha Protein; His Tag of per well



Human TNF alpha Protein; His Tag (Catalog # GM-88209RP) was immobilized at 2 μ g/ml (100 μ L/well). Increasing concentrations of Human TNFR2 Protein; hFc Tag (Catalog # GM-88214RP) were added.