

Human TNF alpha Protein; His Tag

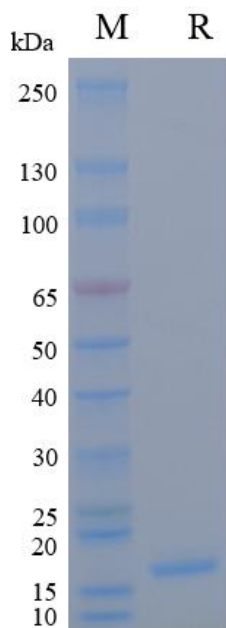
Product Information

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

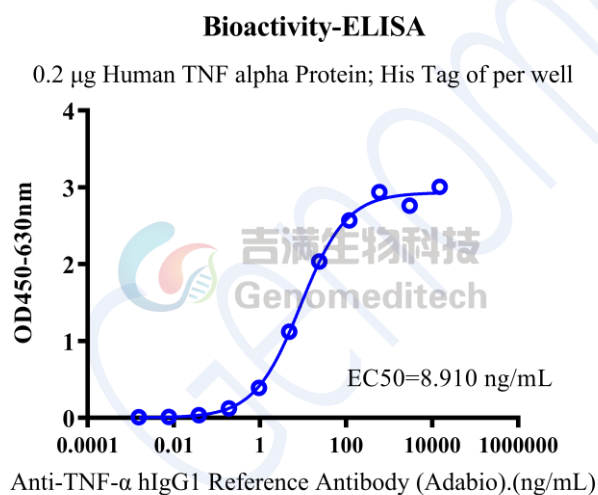
Alternative Names	DIF, TNF-alpha, TNFA, TNFSF2, TNF α
Source	Human TNF alpha Protein; His Tag (GM-88209RP) is expressed from human 293 cells (HEK-293). It contains AA Val 77 - Leu 233 (Accession # P01375). This protein carries a His tag at the C-terminus.
Purity	> 95% as determined by SDS-PAGE
Endotoxin	< 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.

SDS-PAGE

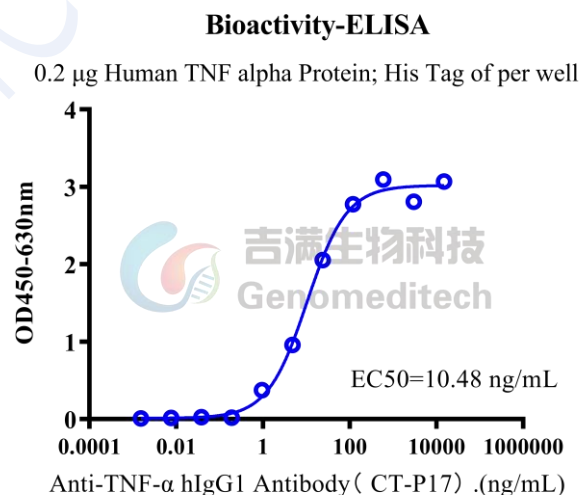


On SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

Bioactivity-ELISA



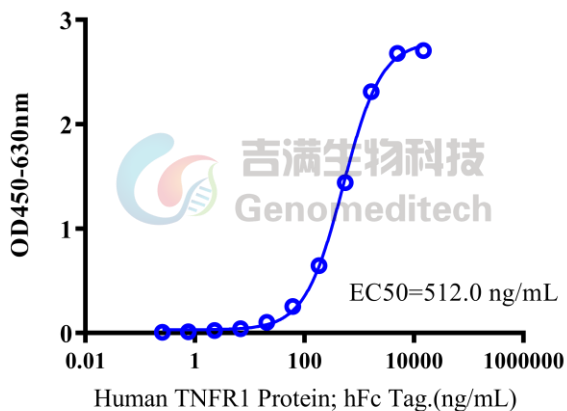
Human TNF alpha Protein; His Tag (Catalog # GM-88209RP) was immobilized at 2 µg/ml (100 µL/well). Increasing concentrations of Anti-TNF-α hIgG1 Reference Antibody (Adabio) (Catalog # GM-87987MAB) were added.



Human TNF alpha Protein; His Tag (Catalog # GM-88209RP) was immobilized at 2 µg/ml (100 µL/well). Increasing concentrations of Anti-TNF-α hIgG1 Antibody (CT-P17) (Catalog # GM-49267AB) were added.

Bioactivity-ELISA

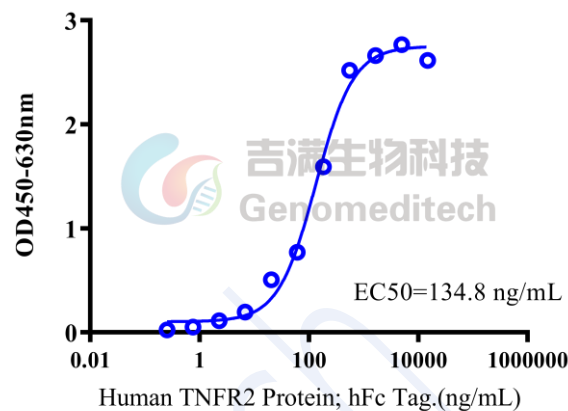
0.2 µg Human TNF alpha Protein; His Tag of per well



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

Bioactivity-ELISA

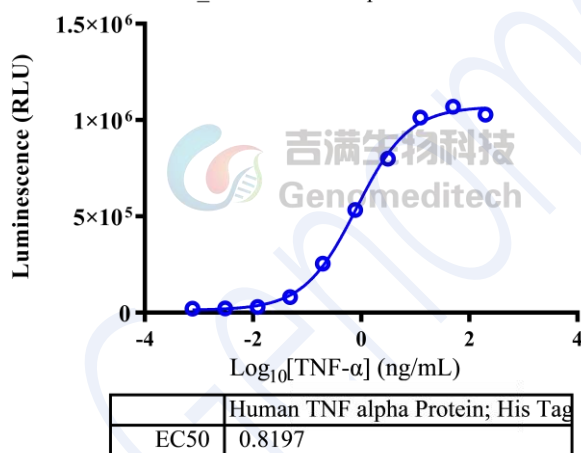
0.2 µg Human TNF alpha Protein; His Tag of per well



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

Bioactivity-CELL BASE

H_TNFR2 Null Reporter Cell Line



Human TNF alpha Protein; His Tag (Catalog # GM-88209RP) was added into H_TNFR2 Null Reporter Cell Line (Catalog # GM-C27615) and stimulates related signals.