

# Human TNFR1 Protein; His Tag

## Product Information

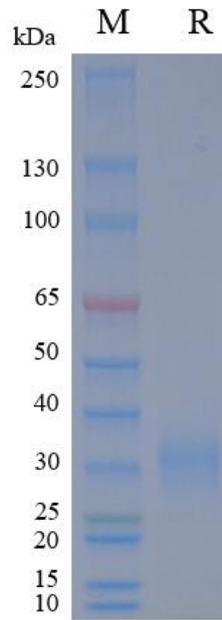
<b>Product Name</b>	Human TNFR1 Protein; His Tag
<b>Storage temp</b>	Store at $\leq -70^{\circ}\text{C}$ , stable for 6 months after receipt. Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.
<b>Catalog# / Size</b>	<b>GM-88211RP-100 / 100 <math>\mu\text{g}</math></b> <b>GM-88211RP-1000 / 1 mg</b>

## Protein Information

<b>Alternative Names</b>	TNFR1, CD120a, TNFRSF1A, FPF, TBP1, TNF-R, TNF-R-I, TNFAR
<b>Source</b>	Human TNFR1 Protein; His Tag (GM-88211RP) is expressed from human 293 cells (HEK-293). It contains AA Leu 30 - Thr 211 (Accession # P19438-1). This protein carries a His tag at the C-terminus.
<b>Purity</b>	> 95% as determined by SDS-PAGE
<b>Endotoxin</b>	< 1 EU/ $\mu\text{g}$ , determined by LAL gel clotting assay
<b>Predicted Mol Mass</b>	21.3 KDa
<b>Formulation</b>	Supplied as a 0.2 $\mu\text{m}$ filtered solution of PBS, pH7.2-7.4.
<b>Description</b>	<p>TNFR1, or Tumor Necrosis Factor Receptor 1, is a transmembrane receptor that binds the pro-inflammatory cytokine TNF-<math>\alpha</math>. It is widely expressed across many cell types and plays a central role in mediating inflammatory responses, cell survival, apoptosis, and immune regulation. The extracellular region contains a ligand-binding domain, while the intracellular region includes a death domain (DD) that recruits adaptor proteins to propagate signals. TNFR1 signaling can lead to either pro-survival or pro-apoptotic outcomes depending on the cellular context and signaling complex composition.</p> <p>TNFR1 signaling starts with Complex I at the membrane, activating NF-<math>\kappa\text{B}</math>, MAPK, and pro-survival pathways. If signaling shifts to Complex II in the cytosol (or caspase-8 is inhibited), it can trigger apoptosis via caspase cascades. It can also drive necroptosis via RIPK1/RIPK3/MLKL when caspase activity is low. Cross-talk and ubiquitination dynamics tune the balance between inflammation, survival, and death in a context-dependent manner.</p>

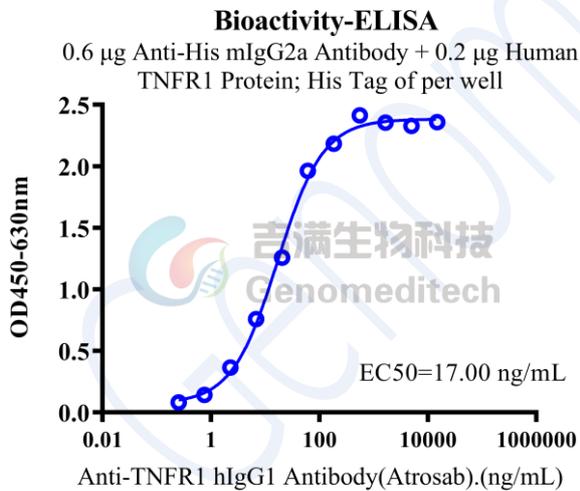
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## SDS-PAGE



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 TNFR1 Protein; His Tag (Catalog # GM-88211RP) was immobilized at 2  $\mu\text{g}/\text{ml}$  (100  $\mu\text{L}/\text{well}$ ) on Anti-His mIgG2a Antibody (Catalog # GM-59493AB) (0.6  $\mu\text{g}/\text{well}$ ) precoated. Increasing concentrations of Anti-TNFR1 hIgG1 Antibody (Atrosab) (Catalog # GM-51152AB) were added.