Cytokines

Human Recombinant TNF-receptor 1

Tumor necrosis factor receptor 1

Catalog #	78126	20 µg
	78126.1	100 µg

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Product Description

Tumor necrosis factor receptor type 1 (TNFR1) is a member of the TNF receptor superfamily and is activated upon binding to TNF-α. TNFR1 activates NF-κB and MAPK pathways, which results in inflammation, apoptosis, and inhibition of tumorigenesis and viral replication. TNFR1 is essential for transducing TNF signals during organogenesis and surviving infections caused by intracellular bacteria (Hehlgans & Pfeffer). Soluble TNFR1 is released into the bloodstream to bind circulating TNF-α and suppress inflammation. Mutations in TNFR1 result in TNFR-associated periodic syndrome that manifests with inflammatory episodes (Turner et al.).

Product Information

Alternative Names:	CD120a, TNFAR, TNFR55, TNFRSF1A
Accession Number:	P19438
Amino Acid Sequence:	MDSVCPQGKY IHPQNNSICC TKCHKGTYLY NDCPGPGQDT DCRECESGSF TASENHLRHC LSCSKCRKEM GQVEISSCTV DRDTVCGCRKN QYRHYWSENL FQCFNCSLCL NGTVHLSCQE KQNTVCTCHA GFFLRENECV SCSNCKKSLE CTKLCLPQI EN
Predicted Molecular Mass:	18.3 kDa
Species:	Human
Cross Reactivity:	Mouse, Rat
Formulation:	Lyophilized from a sterile-filtered aqueous solution containing sodium phosphate, pH 7.5.
Source:	E. coli

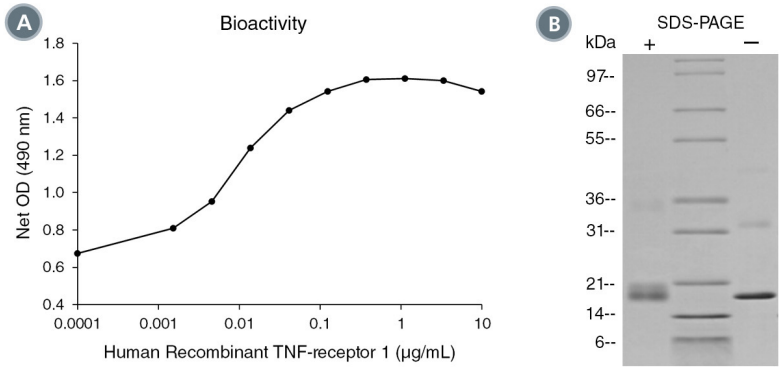
Specifications

Activity:	The specific activity is ≥ 1.0 x 10^4 units/mg (EC50 ≤ 0.10 µg/mL) as determined by neutralization of human TNF-α induced cytolysis of L929 cells.
Purity:	≥ 95%
Endotoxin Level:	Measured by kinetic Limulus amebocyte lysate (LAL) analysis and is ≤ 1 EU/µg protein.

Preparation and Storage

Storage:	Store at -20°C to -80°C.
Stability:	Stable as supplied for 12 months from date of receipt.
Preparation:	Centrifuge vial before opening. Reconstitute the product in sterile water to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex. OPTIONAL: After reconstitution, if product will not be used immediately, dilute with concentrated bovine serum albumin (BSA) to a final BSA concentration of 0.1%. The effect of storage of stock solution on product performance should be tested for each application. As a general guide, do not store at 2 - 8°C for more than 1 month or at -80°C for more than 3 months. Avoid repeated freeze-thaw cycles.

Data



(A) The biological activity of Human Recombinant TNF-receptor 1 was tested by its ability to neutralize human TNF-α induced cytolysis of L929 cells. Cell viability was measured after 66 hours using a fluorometric assay method. The EC50 is defined as the effective concentration of the growth factor at which cell viability is at 50% of maximum. The EC50 in the above example is 0.01 µg/mL.
(B) 1 µg of Human Recombinant TNF-receptor 1 was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Human Recombinant TNF-receptor 1 has a predicted molecular mass of 18.3 kDa.

Related Products

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References

Hehlgans T & Pfeffer K. (2005) The intriguing biology of the tumour necrosis factor/tumour necrosis factor receptor superfamily: players, rules and the games. Immunology 115(1): 1–20.
Turner MD et al. (2012) Tumour necrosis factor receptor trafficking dysfunction opens the TRAPS door to pro-inflammatory cytokine secretion. Biosci Rep 32(2): 105–12.

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