TNFR-1/CD120a Protein, Human (HEK293, His)

Cat. No.:	HY-P700263
Synonyms:	Tumor necrosis factor receptor superfamily member 1A; CD120a; TNF-R1; TNFRSF1A
Species:	Human
Source:	HEK293
Accession:	P19438 (L30-T211)
Gene ID:	7132
Molecular Weight:	28-38kDa

PROPERTIES

AA Sequence	L V P H L G D R E K R D S V C P Q G K Y I H P Q N N S I C C T K C H K G T Y L Y N D C P G P G Q D T D C R E C E S G S F T A S E N H L R H C L S C S K C R K E M G Q V E I S S C T V D R D T V C G C R K N Q Y R H Y W S E N L F Q C F N C S L C L N G T V H L S C Q E K Q N T V C T C H A G F F L R E N E C V S C S N C K K S L E C T K L C L P Q I E N V K G T E D S G T T
Biological Activity	1.Measured by its ability to inhibit the TNF-alpha mediated cytotoxicity inthe L-929 mouse fibroblast cells in the presence of the metabolic inhibitoractinomycin D.The $_{50}$ for this effect is 0.06164 μg/mLin the presence of 0.25 ng/mL of recombinant humanTNF-alpha, corresponding to a specific activity is 1.622×10^4 units/mg. 2.Anti-His antibody Immobilized on CM5 Chip captured TNFR-1/CD120a His Tag, Human, can bind TNF-α, Human with an affinity constant of 0.106 nM as determined in SPR assay.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<0.1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	The TNFR-1/CD120a protein acts as a receptor for TNFSF2/TNF-alpha and homotrimeric TNFSF1/lymphotoxin-alpha. Upon

TNF binding, the adapter molecule FADD recruits caspase-8 to the activated receptor, initiating the formation of the death-inducing signaling complex (DISC). This complex leads to caspase-8 proteolytic activation, triggering subsequent caspase-mediated apoptosis. TNFR-1/CD120a is involved in the induction of non-cytocidal TNF effects, including the establishment of an anti-viral state and activation of acid sphingomyelinase. Homotrimerization of TNFR-1/CD120a upon TNF binding provides a molecular interface for specific interactions with the death domain of TRADD, recruiting various TRADD-interacting proteins such as TRAFS, RIPK1, and possibly FADD. This complex activates distinct signaling cascades, including apoptosis and NF-kappa-B signaling. Additionally, TNFR-1/CD120a interacts with a variety of proteins, including BAG4, BABAM2, FEM1B, GRB2, SQSTM1, TRPC4AP, NOL3, SH3RF2, PGLYRP1, and MADD, playing a role in modulating the TNF-signaling pathway and apoptosis induction.

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