



Tumor Necrosis Factor Receptor, mouse recombinant (rmTNF-R1)

Catalog No: 99937
Lot No: XXXXX
Source: *E. coli*
Synonyms: Tumor necrosis factor receptor superfamily member 1A, Tumor necrosis factor receptor 1, TNF-R1, Tumor necrosis factor receptor type I, TNF-RI, TNFR-I, p55, p60, CD120a, Tnfrsf1a, Tnfr-1, Tnfr1, FPF, TNF-R, TNFAR, TNFRI, p55-R, TNFR60, Tnfr-2, TNF-R-I, TNF-R55, TNFRp55, TNF-alphaR1, TNFalpha-R1

Background

TNFR1 belongs to the TNF-receptor superfamily. TNFR1 is a receptor for TNFSF2/TNF- α and homotrimeric TNFSF1/lymphotoxin- α . There are two types of soluble TNF receptors, sTNFR-I and sTNFR-II, which act to neutralize the biological activities of TNF- α and TNF- β . The levels of these soluble receptors seem to increase as a result of shedding of the extracellular domains of the membrane bound receptors. TNF- α , TNFR1 and TNFR2 have roles in cellular differentiation. TNFR1 and TNFR2 function in cell type-specific renal injury. TNFR1 is capable of signaling both cell survival and apoptosis. TNFR1-induced apoptosis requires two sequential signaling complexes. TNFR1 is capable of activating NF-kappaB, mediate apoptosis, and function as a regulator of inflammation. Oxidative stress promotes TNFR1 and TNFR2 self-interaction, ligand-independent and enhanced ligand-dependent TNF signaling. TNFR1 contributes to the induction of non-cytocidal TNF effects, including anti-viral state and activation of the acid sphingomyelinase. Human TNFR1 has a major region which controls cell surface expression. High levels of soluble TNF receptors are found in the amniotic fluid of pregnant women. Germline mutations of the extracellular domains of TNFR1 are linked to the autosomal dominant periodic fever syndrome. The impaired receptor clearance is believed to be a mechanism of the disease. Familial hibernian fever (FHF) is caused by defects in TNFRSF1A gene.

Description

TNFR Mouse Recombinant, produced in *E. coli*, is a single, non-glycosylated polypeptide chain containing 191 amino acids. It has a molecular mass of 21.1 kDa. The TNFR is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered, white, lyophilized (freeze-dried) powder.

Formulation

TNFR protein was lyophilized from a 0.2 μ m filtered concentrated solution in PBS (pH 7.4).

Solubility

It is recommended to reconstitute the lyophilized TNFR in sterile 18 M Ω -cm H₂O not less than 100 μ g/ml, which can then be further diluted to other aqueous solutions.

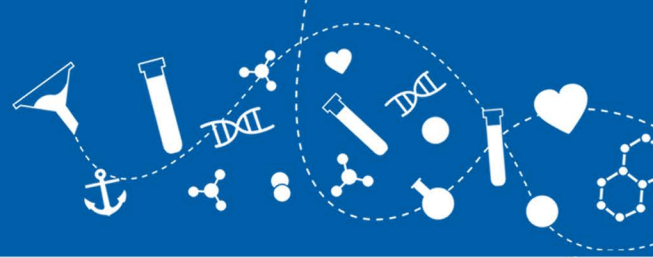
Stability

Lyophilized TNFR, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution TNFR should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Amino Acid Sequence

IHPSGVTGLV PSLGDREKRD SLCPQGKYVH SKNNSICCTK CHKGTYLVS D CPSPGRD TVC RECEKGTFTA SQNYLRQCLS
CKTCRKEMSQ VEISPCQADK DTVCGCKENQ FQRYLSETHF QCVDCSPCFN GTVTIPCKET QNTVCNCHAG FFLRESECV P
CSHCKKNEEC MKLCLPPPLA NVTNPQDSGT A

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Activity

The ED50, as determined by its ability to inhibit the TNF- α mediated cytotoxicity in the L-929 cells, is less than 1.0 $\mu\text{g/ml}$, corresponding to a specific activity of > 1000 IU/mg in the presence of 0.1 ng/mL of rMuTNF- α .

Usage

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