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**Product Data Sheet**


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Product Name: TNFR Human  
 Cat. No.: GP20982  
 Batch No.: 1

**Product Data**

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped at Room temp.
Synonyms	Tumor necrosis factor receptor superfamily member 1A; Tumor necrosis factor receptor 1; Tumor necrosis factor receptor type I; TNF-R1; TNF-RI; TNFR-I; p60; p55; CD120a; TNFRSF1A; TNFAR; TNFR1; FPF; TBP1; TNF-R; p55-R; TNFR55; TNFR60; TNF-R-I; TNF-R55; MGC19588.		
Amino Acid Sequence	MDSVCPQGKY IHPQNNSICC TKCHKGTLYL NDCPGPGQDT DCRECESSGSF TASENHLRHC LSCSKCRKEM GQVEKSSCTV DRDTVCGCRK NQYRHYWSEN LFQCFNCSLC LNGTVHLSCQ EKQNTVCTCH AGFFLRENEC VSCSNCKKSL ECTKLCLPQI EN.		
Solubility	It is recommended to reconstitute the lyophilized TNFR in sterile 18M-cm H <sub>2</sub> O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.		
Formulation	The TNFR protein was lyophilized from 10mM sodium phosphate buffer pH-7.5.		

**Introduction**

TNFR1 belongs to the TNF-receptor superfamily. TNFR1 is a receptor for TNFSF2/TNF-alpha and homotrimeric TNFSF1/lymphotoxin-alpha. There are 2 types of soluble TNF receptors: sTNFR-I and sTNFR-II, which act to neutralize the biological activities of TNF alpha and TNF beta. The levels of these soluble receptors seem to increase as a result of shedding of the extracellular domains of the membrane bound receptors. TNF-a, 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 2 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

**Caution: Product has not been fully validated for medical applications. For research use only.**

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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.

### Stability

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

### Background

TNFR Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 162 amino acids and having a total molecular mass of 18.2 kDa. TNFR Human Recombinant is purified by proprietary chromatographic techniques.

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