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## Product Data Sheet

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Product Name: TNFR2 Mouse  
 Cat. No.: GP20990  
 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 1B; Tumor necrosis factor receptor 2; TNF-R2; Tumor necrosis factor receptor type II; TNF-RII; TNFR-II; p75; p80 TNF-alpha receptor; CD120b; Tnfrsf1b; Tnfr-2; Tnfr2; TNFBR; TNFR80; TNFRII; TNF-R75; TNF-R-II; TNF-alphaR2; TNFalpha-R2.		
Amino Acid Sequence	VPAQVVLTPY KPEPGYECQI SQEYYDRKAQ MCCA KCPPGQ YVKHFCNKTS DTVCADCEAS MYTQVWNQFR TCLSCSSSCT TDQVEIRACT KQQRVCACE AGRYCALKTH SGSCRQCMRL SKCGPGFGVA SSRAPNGNVL CKACAPGTFS DTTSSSTDVCR PHRICSILAI PGNASTDAVC APESPTLSAI PRTLYVSQPE PTRSQPLDQE PGPSQTPSIL TSLGSTPIIE QSTKGG.		
Solubility	It is recommended to reconstitute the lyophilized TNFR2 in sterile 18M-cm H2O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.		
Formulation	TNFR2 protein was lyophilized from a 0.2µm filtered concentrated solution in PBS, pH 7.4.		

### Introduction

TNFR2 belongs to the TNF-receptor superfamily. TNFR2 is receptor with high affinity for TNFSF2/TNF-alpha and approximately 5-fold lower affinity for homotrimeric TNFSF1/lymphotoxin-alpha. TNFR2 mediates the majority of the metabolic effects of TNF-alpha. In addition, knockout studies in mice propose a role for TNFR2 in protecting neurons from apoptosis by stimulating antioxidative pathways. TNFR2 expression might have a significant role in the angiogenesis, tumor cell proliferation and metastasis of Invasive micropapillary carcinoma of the breast. 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

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

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shedding of the extracellular domains of the membrane bound receptors. High levels of soluble TNF receptors are found in the amniotic fluid of pregnant women. TNFR2 and TNFR1 form a heterocomplex which mediates the recruitment of 2 anti-apoptotic proteins, c-IAP1 and c-IAP2, which possess E3 ubiquitin ligase activity. IAPs function in TNF-receptor signaling is unknown; nevertheless, c-IAP1 is believed to potentiate TNF-induced apoptosis by the ubiquitination and degradation of TNF-receptor-associated factor 2, which mediates anti-apoptotic signals. Oxidative stress promotes TNFR1 and TNFR2 self-interaction, ligand-independent and enhanced ligand-dependent TNF signaling. TNF- $\alpha$ , TNFR1 and TNFR2 have roles in cellular differentiation. TNFR1 and TNFR2 function in cell type-specific renal injury.

### Biological Activity

The ED50 as determined by its ability to inhibit the TNF- $\alpha$  mediated cytotoxicity in the L-929 cells is less than 2 $\mu$ g/ml, corresponding to a specific activity of > 500IU/mg in the presence of 0.1ng/mL of rHuTNF- $\alpha$ .

### Stability

Lyophilized TNFR2 although stable at room temperature for 3 weeks, should be stored desiccated below -18C. Upon reconstitution TNFR2 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

TNFR2 Mouse Recombinant produced in E.coli is a single, non-glycosylated polypeptide chain containing 236 amino acids and having a molecular mass of 25.3kDa. The TNFR2 is purified by proprietary chromatographic techniques.

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