

TECHNICAL DATA SHEET

Recombinant Human sTNF Receptor Type I (Carrier-free)

Catalog Number: 21-7134

RPx-Pro™ Recombinant Protein

PRODUCT INFORMATION

CONTENTS

Recombinant Human sTNF Receptor Type I (Carrier-free)

DESCRIPTION

TNF receptor I (TNFRI), also known as TNFRSF1A and CD120a, is a pro-inflammatory cytokine and member of the TNF Receptor superfamily. TNFRI is ubiquitously expressed and stored in the Golgi until receiving inflammatory stimuli. It serves as the main receptor for TNF-alpha, but also binds TNF-beta (LT-alpha). TNFRI contains a cytoplasmic death domain that, along with TRADD, participates in activating the classical NF-kB pathway and in initiating apoptosis. Binding of TNF-alpha or -beta to TNFRI results in the activation of this signal transduction pathway. Cleavage or shedding of TNFRI from the cell surface results in a soluble format that is released into general circulation where it binds TNF with high affinity, acting as a TNF antagonist. sTNFRI has also been associated with various disease states including rheumatoid arthritis.

MOLECULAR MASS

Recombinant Human sTNF receptor I comprises the ligand-binding extracellular domain and is 162 amino acids long with a molecular weight of 18.3 kDa.

AMINO ACID SEQUENCE

MDSVCPQGKY IHPQNNISCC TKCHKGTYLY NDCPGPGQDT DCRECESGSF TASENHLRHC LSCSKCRKEM GQVEISSCTV
DRDTCVCGCRK NQYRHYWSEN LFQCFNCSLC LNGTVHLSCQ EKQNTVCTCH AGFFLRENEC VSCSNCKKSL ECTKLCLPQI EN

SOURCE

E. coli

APPLICATIONS

Bioassay

PURITY

98 %

STORAGE

-20°C

PROTEIN CONTENT

Verified by UV Spectroscopy and/or SDS-PAGE gel.

ENDOTOXIN LEVEL

Endotoxin level is <0.1 ng/µg of protein (<1 EU/µg).

AUTHENTICITY

Verified by N-terminal and Mass Spectrometry analyses (when applicable).

CROSS REACTIVITY

Mouse, Rat

BIOACTIVITY

The ED₅₀ is determined by measuring the inhibition of TNF-alpha mediated cytotoxicity in murine L-929 cells. In the presence of 0.25 ng/ml of recombinant human TNF-alpha, the expected ED₅₀ is 0.05 µg/ml.

RESEARCH AREAS

TNF Superfamily, Apoptosis, Neurobiology, Inflammation, Receptors

RECONSTITUTION

See Certificate of Analysis (COA) for lot specific reconstitution information.

REFERENCES

Pfeffer K. 2003. Cytokine Growth Factor Rev. 14(3-4): 185-191. Banner DW, D'Arcy A, Janes W, Gentz R, Schoenfeld HJ, Broger C, Loetscher H and Lesslauer W. 1993. Cell. 73(3): 431-445. Wajant H and Scheurich P. 2011. FEBS J. 278(6): 862-876. Turner MD, Chaudhry A and Nedjai B. 2012. Biosci Rep. 32(2): 105-112. Xanthoulea S, Pasparakis M, Kousteni S, Brakebusch C, Wallach D, Bauer J, Lassmann H and Kollias G. 2004. J Exp Med. 200(3): 367-376.

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