**Human TNFR2 ECD ( Extracellular Domain), Fc-fusion, Recombinant**

**Background:**
TNFR1 and TNFR2 are single-pass, type I transmembrane glycoproteins that are two distinct types of high-affinity cell surface receptors for TNF. Both receptors are the founding members of the TNF receptor superfamily (TNFRSF) and are designated TNFRSF1A and TNFRSF1B, respectively. The extracellular regions of both receptors contain 4 conserved cysteine-rich repeats that mediate the interaction with TNF. However their intracellular sequences have no homology, indicative of distinct signaling pathways. TNFR1 and TNFR2 form a heterocomplex on the cell surface that mediates the recruitment of adaptor proteins for signal transduction. Soluble truncated forms of TNFR1 and TNFR2 have been identified in human serum and urine, which can neutralize the biological activities of TNF. Whereas all cell types studied express TNFR1, TNFR2 expression is limited primarily to hematopoietic cells and cells of the immune system. TNFR2 mediates most of the metabolic effects of TNF. TNFR2 binds with high affinity to TNF-α and approximately 5-fold lower affinity to TNF-β. The soluble form of TNFR2 is produced from the membrane form by proteolytic processing and is clinically used to treat moderate to severe rheumatoid arthritis (RA). In addition high plasma levels of soluble TNFR2 are associated with increased incidence of coronary heart disease.

**Gene Symbol:**
- **TNFR2**

**Gene Synonym:**
- TNFRSF1B; CD120b; p75; TBPII; TNFR; TNFR1B; TNFR80; TFN-R75; p75TNFR; TNF-II

**Full Name:**
Tumor necrosis factor receptor superfamily member 1B; tumor necrosis factor receptor 2; tumor necrosis factor beta receptor; tumor necrosis factor receptor type II; tumor necrosis factor binding protein 2

**NCBI Gene ID:**
- 7133

**UniProt Entry:**
- P20333

**Species:**
Homo sapiens

**Molecule Class:**
1-pass type I transmembrane

**Gene Family:**
TNF receptor (TNFR) superfamily

**Pathway & Disease:**
- TNF Signaling Pathway
- Inflammation

**Research Area:**
- Immunology
- Cancer

**Construct Detail:**
The recombinant human TNFR2-Fc fusion is expressed as a 460 amino acid protein consisting of Leu23 - Asp257 region of TNFR2 (UniProt accession #P20333) and a C-terminal Fc from human IgG1, which exists as a dimer/tetramer under non-reducing conditions (see the gel image inserted).

**Source:**
Human cells stably expressing TNFR2-Fc and growing in chemical-defined media with no animal component or antibiotics.

**M.W.:**
Calculated molecular mass 50.5 kDa; estimated by SDS-PAGE under reducing condition 75-85 kDa probably due to glycosylation. Calculated extinction coefficients (M-1 cm-1, at 280nm): 61110.

**Purity:**
>95% judged by SDS-PAGE under reducing condition (see the gel image inserted).

**Formulation:**
Supplied at 0.5 mg/ml in sterile PBS pH7.4 (concentration determined by UV spectrometry and verified by SDS-PAGE and Coomassie blue staining).

**Endotoxin:**
<0.1 EU per 1 μg of purified recombinant protein determined by the LAL method.

**Bioactivity:**
Binds to its ligand TNF and inhibits TNF-mediated biological activities including NF-kB activation and cytotoxicity in the mouse L929 fibrosarcoma cells.

**Storage:**
The product is shipped at 4°C. Upon receipt, centrifuge the product briefly before opening the vial. Store small aliquots at the temperature below −20°C for long-term storage and the product is stable for 3 months. Avoid repeated freeze-thaw cycles.

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