

# Recombinant Human TNFRSF1B

**Cat. No.** TNFRSF1B-76H    **Lot. No.** (See product label)

## SPECIFICATION

### Product Overview

Recombinant Human Tumor Necrosis Factor Receptor produced in CHO is a dimeric, glycosylated, polypeptide chain consisting of the extracellular ligand-binding portion of the human 75 kilodalton (p75) tumor necrosis factor receptor (TNFR) linked to the Fc portion of human IgG1. The Fc component of TNFR contains the CH2 domain, the CH3 domain and hinge region, but not the CH1 domain of IgG1. It consists of 934 amino acids and has an apparent molecular weight of approximately 150 kilodaltons. The TNFR is purified by standard chromatographic techniques.

### Species

Human

### Source

CHO

### Description

TNFR binds specifically to tumor necrosis factor (TNF) and blocks its interaction with cell surface TNF receptors. TNF is a naturally occurring cytokine that is involved in normal inflammatory and immune responses. It plays an important role in the inflammatory processes of rheumatoid arthritis (RA), polyarticular-course juvenile rheumatoid arthritis (JRA), and ankylosing spondylitis and the resulting joint pathology. Recombinant Human TNFR is a dimeric soluble form of the p75 TNF receptor that can bind to two TNF molecules. TNFR can also modulate biological responses that are induced or regulated by TNF, including expression of adhesion molecules responsible for leukocyte migration (i.e., E-selectin and to a lesser extent intercellular adhesion molecule-1 [ICAM-1]), serum levels of cytokines (e.g., IL-6), and serum levels of matrix metalloproteinase-3 (MMP-3 or stromelysin).

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|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Physical Appearance</b> | Sterile Filtered White lyophilized (freeze-dried) powder.                                                                                                                                                                                                                                                                                                     |
| <b>Purity</b>              | Greater than 98.0% as determined by: (a) Analysis by RP-HPLC. (c) Analysis by SDS-PAGE.                                                                                                                                                                                                                                                                       |
| <b>Formulation</b>         | Each mg contains 1.6 mg mannitol, 0.4 mg sucrose and 48 g tromethamine.                                                                                                                                                                                                                                                                                       |
| <b>Solubility</b>          | It is recommended to reconstitute the lyophilized TNFR in sterile 18 MΩ-cm H <sub>2</sub> O not less than 100 g/ml, which can then be further diluted to other aqueous solutions                                                                                                                                                                              |
| <b>Biological Activity</b> | Potency is determined by its ability to neutralize TNF-alpha mediated growth inhibition of A375 cells, corresponding to a Specific Activity of 1.7 x 10 <sup>7</sup> IU/mg.                                                                                                                                                                                   |
| <b>Storage</b>             | Lyophilized Tumor Necrosis Factor Receptor 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. |

## GENE INFORMATION

|                    |                                                                                                                                                                                                                                               |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>   | TNFRSF1B tumor necrosis factor receptor superfamily, member 1B [ Homo sapiens ]                                                                                                                                                               |
| <b>Synonyms</b>    | TNFRSF1B; tumor necrosis factor receptor superfamily, member 1B; p75; TBP11; TNFBR; TNFR2; CD120b; TNFR1B; TNFR80; TNF-R75; p75TNFR; TNF-R-II; p75 TNF receptor; tumor necrosis factor beta receptor; tumor necrosis factor binding protein 2 |
| <b>Gene ID</b>     | 7133                                                                                                                                                                                                                                          |
| <b>mRNA Refseq</b> | NM_001066                                                                                                                                                                                                                                     |

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|----------------------------|--------------------------------------------------------------------------------------------------------------|
| <b>Protein Refseq</b>      | NP_001057                                                                                                    |
| <b>MIM</b>                 | 191191                                                                                                       |
| <b>UniProt ID</b>          | P20333                                                                                                       |
| <b>Chromosome Location</b> | 1p36.22                                                                                                      |
| <b>Pathway</b>             | Adipocytokine signaling pathway; Amyotrophic lateral sclerosis (ALS); Cytokine-cytokine receptor interaction |
| <b>Function</b>            | protein binding; receptor activity; tumor necrosis factor receptor activity                                  |

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