

# Active Recombinant Human TNFRSF1A, Fc Chimera

**Cat. No.** TNFRSF1A-152H    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| <b>Product Overview</b> | Recombinant Humantumor necrosis factor receptor 1 was fused to the Fc region of human IgG1 (aa 93-330). The chimeric protein was expressed in modified <i>human 293 cells</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Source</b>           | HEK293                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Description</b>      | Tumor necrosis factor alpha (TNF-a ; TNF alpha) and the structurally related lymphotoxin alpha are pro-inflammatory cytokines produced by a variety of immune and non-immune cells in response to multiple stimuli. These stimuli can include bacteria and bacterial products such as LPS, viral infections, T-cell receptor activation and cross-linking of surface immunoglobulin (Ig) on B cells. Expression of TNF-alpha has been detected in macrophages/monocytes, B-cells, T-cells, basophils, eosinophils, glial cells and mast cells. The effects of TNF-a are mediated through the TNF receptors, TNFRI (TNF R1) and TNFRII (TNF R2). TNFRI is a 55 kDa glycoprotein and contains 5 N-linked glycosylation sites. |
| <b>Molecular Mass</b>   | TNF RI-Fc Chimera migrates as a band between 50 and 60 kDa in SDS-PAGE due to post-translation modifications, in particular glycosylation. This compares with the unmodified TNF RI-Fc Chimera that has a predicted molecular mass of 48.0kDa.                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>PI</b>               | TNF RI-Fc Chimera separates into a number of isoforms with a pI between 6.5 and 8.6 in 2D PAGE due to post-translational modifications, in particular glycosylation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

 Tel: 1-631-559-9269    1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)     Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

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|                       | This compares with the unmodified TNF RI-Fc Chimera that has a predicted pI of 7.69.                                                                                                               |
| <b>% Carbohydrate</b> | TNF RI-Fc Chimera consists of 5-20% carbohydrate by weight.                                                                                                                                        |
| <b>Glycosylation</b>  | TNF RI-Fc Chimera has N-linked and possibly O-linked oligosaccharides.                                                                                                                             |
| <b>Purity</b>         | >95%, as determined by SDS-PAGE and visualized by silver stain.                                                                                                                                    |
| <b>Formulation</b>    | When reconstituted in 0.5 ml sterile phosphate-buffered saline, the solution will contain 1% human serum albumin (HSA) and 10% trehalose.                                                          |
| <b>Reconstitution</b> | It is recommended that 0.5 ml of sterile phosphate-buffered saline be added to the vial.                                                                                                           |
| <b>Storage</b>        | Lyophilized products should be stored at 2 to 8°C. Following reconstitution short-term storage at 4°C is recommended, and longer-term storage of aliquots at -18 to -20°C.                         |
| <b>Activity</b>       | The ND <sub>50</sub> of TNF RI-Fc Chimera is typically 15-30 ng/ml as measured by its ability to neutralize TNF-α mediated cytotoxicity in murine WEHI 164 cells in the presence of actinomycin D. |

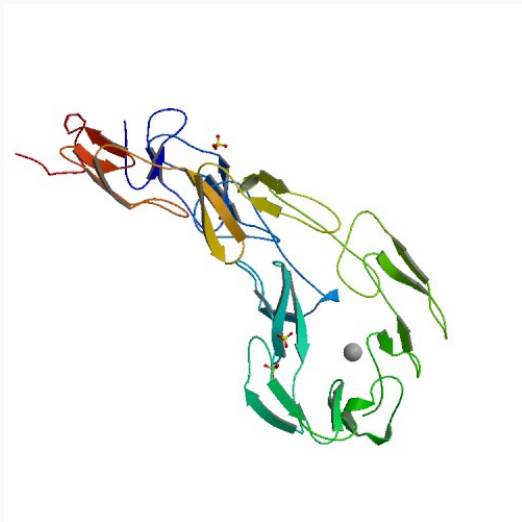
## GENE INFORMATION

|                  |                                                                                                                                                                                                                                                                                                                                          |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b> | TNFRSF1A tumor necrosis factor receptor superfamily, member 1A [ Homo sapiens ]                                                                                                                                                                                                                                                          |
| <b>Synonyms</b>  | tumor necrosis factor receptor superfamily, member 1A; FPF; p55; p60; TBP1; TNF-R; TNFAR; TNFR1; p55-R; CD120a; TNFR55; TNFR60; TNF-R-I; TNF-R55; MGC19588; TNFRSF1A; tumor necrosis factor receptor 1; tumor necrosis factor-α receptor; tumor necrosis factor receptor type 1; tumor necrosis factor binding protein 1; TNF-R1; TNF-RI |

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| <b>Gene ID</b>                      | 7132                                                                                                                                                                            |
| <b>mRNA Refseq</b>                  | NM_001065                                                                                                                                                                       |
| <b>Protein Refseq</b>               | NP_001056                                                                                                                                                                       |
| <b>MIM</b>                          | 191190                                                                                                                                                                          |
| <b>UniProt ID</b>                   | P19438                                                                                                                                                                          |
| <b>Chromosome Location</b>          | 12p13.2                                                                                                                                                                         |
| <b>Pathway</b>                      | Adipocytokine signaling pathway; Alzheimer's disease; Amyotrophic lateral sclerosis (ALS); Apoptosis; Cytokine-cytokine receptor interaction; MAPK signaling pathway; Apoptosis |
| <b>Function</b>                     | protein complex binding; receptor activity; tumor necrosis factor receptor activity                                                                                             |
| <b>PDB rendering based on 1ext.</b> |                                                                                             |