

## Active Recombinant Human TNFRSF8 protein, His/Avi-tagged, Biotinylated

**Cat. No.** TNFRSF8-051H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Biotinylated Recombinant Human TNFRSF8(Phe19-Lys379) protein, fused to His/Avi tag at the C-terminus, was expressed in HEK293 cells .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Source</b>           | HEK293                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>ProteinLength</b>    | Phe19-Lys379                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Description</b>      | <p>CD30, also known as Ki-1 antigen and TNFRSF8, is a 120 kDa type I transmembrane glycoprotein belonging to the TNF receptor superfamily (1, 2). Mature human CD30 consists of a 361 amino acid (aa) extracellular domain (ECD) with six cysteine-rich repeats, a 28 aa transmembrane segment, and a 188 aa cytoplasmic domain (3). In contrast, mouse and rat CD30 lack 90 aa of the ECD and contain only three cysteine-rich repeats. Within common regions of the ECD, human CD30 shares 53% and 49% aa sequence identity with mouse and rat CD30, respectively. Alternate splicing of human CD30 generates an isoform that includes only the C-terminal 132 aa of the cytoplasmic domain. CD30 is normally expressed on antigen-stimulated Th cells and B cells (4-6). However, it is up-regulated in Hodgkin's disease (on Reed-Sternberg cells), other lymphomas, chronic inflammation, and autoimmunity (7). CD30 binds to CD30 Ligand/TNFSF8 which is expressed on activated Th cells, monocytes, granulocytes and medullary thymic epithelial cells (1, 5). CD30 signaling co-stimulates antigen-induced Th0 and Th2 proliferation and cytokine</p> |

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secretion but favors a Th2-biased immune response (8). In the absence of antigenic stimulation, it can still induce T cell expression of IL-13 (9). CD30 contributes to thymic negative selection by inducing the apoptotic cell death of CD4+CD8+ T cells (10, 11). In B cells, CD30 ligation promotes cellular proliferation and antibody production in addition to the expression of CXCR4, CCL3, and CCL5 (5, 12). An 85-90 kDa soluble form of CD30 is shed from the cell surface by TACE-mediated cleavage (13, 14). Soluble CD30 retains the ability to bind CD30 Ligand and functions as an inhibitor of normal CD30 signaling (15).

|                             |                                                                                                                                                                                                                                                                               |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Predicted N Terminal</b> | Phe19                                                                                                                                                                                                                                                                         |
| <b>Form</b>                 | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose.                                                                                                                                                                                                            |
| <b>Bio-activity</b>         | Measured by its binding ability in a functional ELISA. When Recombinant Human TNFSF8 is immobilized at 0.25 µg/mL (100 µL/well), the concentration of Biotinylated Recombinant Human TNFRSF8 His-tag Avi-tag that produces 50% of the optimal binding response is 2-10 ng/mL. |
| <b>Molecular Mass</b>       | 82-98 kDa                                                                                                                                                                                                                                                                     |
| <b>Endotoxin</b>            | <0.10 EU per 1 µg of the protein by the LAL method.                                                                                                                                                                                                                           |
| <b>Purity</b>               | >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.                                                                                                                                                                  |
| <b>Applications</b>         | Bioactivity                                                                                                                                                                                                                                                                   |
| <b>Storage</b>              | Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 3 months, -20 to -70 °C under sterile conditions after                       |

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reconstitution.

**Reconstitution** Reconstitute at 500 µg/mL in PBS.

**Conjugation** Biotin

## GENE INFORMATION

**Gene Name** TNFRSF8 tumor necrosis factor receptor superfamily, member 8 [ Homo sapiens ]

**Official Symbol** TNFRSF8

**Synonyms** TNFRSF8; tumor necrosis factor receptor superfamily, member 8; CD30, D1S166E; tumor necrosis factor receptor superfamily member 8; KI 1; Ki-1 antigen; CD30L receptor; cytokine receptor CD30; lymphocyte activation antigen CD30; CD30; Ki-1; D1S166E;

**Gene ID** 943

**mRNA Refseq** NM\_001243

**Protein Refseq** NP\_001234

**MIM** 153243

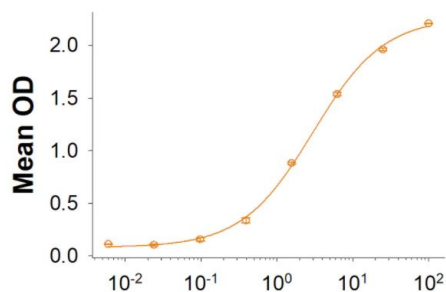
**UniProt ID** P28908

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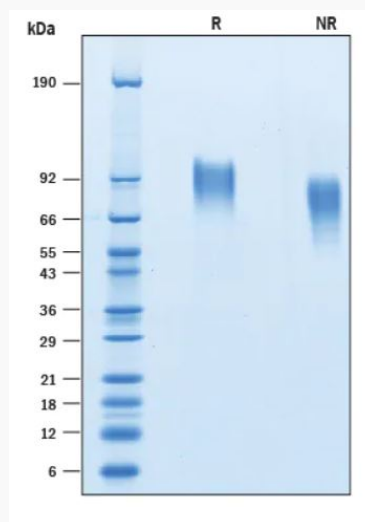
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## Binding Activity



## SDS-PAGE



2 µg/lane Protein was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining.