

DESCRIPTION

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|-------------------------------------|--|--------|---|
| Source | Human embryonic kidney cell, HEK293-derived human CD30/TNFRSF8 protein | | |
| | Human CD30/TNFRSF8 (Phe19-Lys379) Accession # P28908.1 | IEGRMD | Human IgG ₁ (Pro100-Lys330) |
| | N-terminus | | C-terminus |
| N-terminal Sequence Analysis | Phe19 | | |
| Structure / Form | Disulfide linked homodimer, Biotinylated via amines | | |
| Predicted Molecular Mass | 65 kDa | | |

SPECIFICATIONS

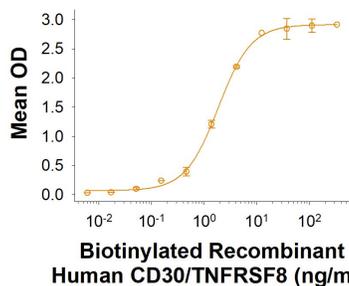
| | |
|------------------------|---|
| SDS-PAGE | 80-115 kDa, under reducing conditions. |
| Activity | Measured by its binding ability in a functional ELISA. Biotinylated Recombinant Human CD30/TNFRSF8 Fc Chimera (Catalog # BT11155) binds to Recombinant Human CD30 Ligand/TNFSF8 (Catalog # 1028-CL) with an ED ₅₀ of 0.800-16.0 ng/mL. |
| Endotoxin Level | <0.10 EU per 1 µg of the protein by the LAL method. |
| Purity | >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining. |
| Formulation | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. |

PREPARATION AND STORAGE

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|--------------------------------|---|
| Reconstitution | Reconstitute at 250 µg/mL in water. |
| Shipping | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. |
| Stability & Storage | Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 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 reconstitution. |

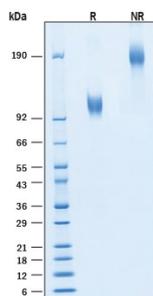
DATA

Binding Activity



Biotinylated Recombinant Human CD30/TNFRSF8 Fc Chimera Protein Binding Activity. In a functional ELISA, Biotinylated Recombinant Human CD30/TNFRSF8 Fc Chimera Protein (Catalog # BT11155) binds to Recombinant Human CD30 Ligand/TNFSF8 (Catalog # 1028-CL) with an ED₅₀ of 0.800-16.0 ng/mL.

SDS-PAGE



Biotinylated Recombinant Human CD30/TNFRSF8 Fc Chimera Protein SDS-PAGE. 2 µg/lane of Biotinylated Recombinant Human CD30/TNFRSF8 Fc Chimera Protein (Catalog # BT11155) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 80-115 kDa and 160-230 kDa, respectively.

BACKGROUND

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 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).

References:

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