

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived human CD30/TNFRSF8 protein			
	Human CD30/TNFRSF8 (Phe19-Lys379) Accession # P29808.1	I EGRMD	Human IgG ₁ (Pro100-Lys330)	Avi-tag
	N-terminus		C-terminus	
N-terminal Sequence	Phe19			
Analysis				
Structure / Form	Disulfide-linked homodimer, biotinylated via Avi-tag			
Predicted Molecular Mass	67 kDa			

SPECIFICATIONS

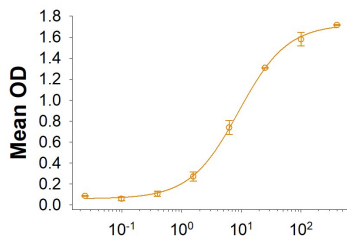
SDS-PAGE	107-127 kDa, under reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human CD30 Ligand/TNFSF8 (Catalog # 1028-CL) is immobilized at 0.25 µg/mL (100 µL/well), the concentration of Biotinylated Recombinant Human CD30/TNFRSF8 Fc Chimera Avi-tag (Catalog # AV110240) that produces 50% of the optimal binding response is 3-15 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

Reconstitution	Reconstitute at 500 µg/mL in PBS.
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

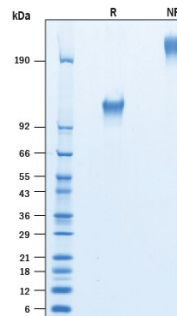
Binding Activity



Biotinylated Recombinant Human CD30/TNFRSF8 Fc Chimera Avi-tag (ng/mL)

When Recombinant Human CD30 Ligand/TNFSF8 (Catalog # 1028-CL) is immobilized at 0.25 µg/mL, 100 µL/well, it binds Biotinylated Recombinant Human CD30/TNFRSF8 Fc Chimera Avi-tag (Catalog # AV110240) with an ED₅₀ of 3-15 ng/mL.

SDS-PAGE



2 µg/lane of Recombinant Human CD30/TNFRSF8 Fc Chimera Avi-tag (Catalog # AV1 10240) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 107-127 kDa and 210-250 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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