Biotinylated Recombinant Human CD48/SLAMF2 His-tag Avi-tag

Catalog Number: AVI3644

DESCRIPTION

Source

Chinese Hamster Ovary cell line, CHO-derived human CD48/SLAMF2 protein

Human CD48/SLAMF2 (Gln27-Ser220) Accession # P09326.2	HHHHHH	Avi-tag

N-terminus C-terminus

N-terminal Sequence Analysis	Gln27 (Blocked, Predicted)
Structure / Form	Biotinylated via Avi-tag
Predicted Molecular Mass	25 kDa

SPECIFICATIONS

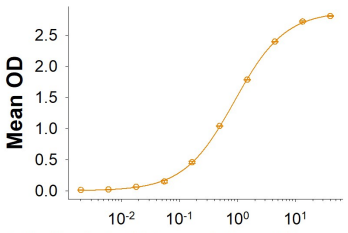
SDS-PAGE	43-51 kDa, under reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human 2B4/CD244/SLAMF4 Fc Chimera (Catalog # 1039-2B) is immobilized at 1 µg/mL (100 µL/well), the concentration of Biotinylated Recombinant Human CD48/SLAMF2 His-tag Avi-tag (Catalog # AVI3644) that produces 50% of the optimal binding response is approximately 0.3-1.8 µg/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 250 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.** • 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

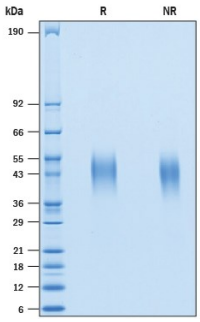
Binding Activity



Biotinylated Recombinant Human CD48/SLAMF2 His-tag Avi-tag (µg/mL)

When Recombinant Human 2B4/CD244/SLAMF4 Fc Chimera (Catalog # 1039-2B) is immobilized at 1 µg/mL (100 µL/well), the concentration of Biotinylated Recombinant Human CD48/SLAMF2 His-tag Avi-tag (Catalog # AVI3644) that produces 50% of the optimal binding response is approximately 0.3-1.8 µg/mL.

SDS-PAGE



2 µg/lane of Biotinylated Recombinant Human CD48/SLAMF2 His-tag Avi-tag (Catalog # AVI3644) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 43-51 kDa.

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Catalog Number: AVI3644

BACKGROUND

CD48, also known as BLAST-1, BCM-1, and SLAMF2, is a 65 kDa GPI-linked protein in the CD2 family of immunoglobulin superfamily proteins (1-3). The human CD48 cDNA encodes a 243 amino acid (aa) precursor that includes a 26 aa signal sequence, a 194 aa mature protein containing two Ig-like C2-type domains, and a 23 aa C-terminal propeptide (4). A soluble form of CD48 has been detected in the serum of lymphoid leukemia and arthritis patients (5). Human CD48 shares approximately 50% aa sequence identity with mouse and rat CD48. It shares 20%-26% aa sequence identity with comparable regions of human 2B4, BLAME, CD2F-10, CD84, CD229, CRACC, NTB-A, and SLAM. CD48 is expressed on most lineage-committed hematopoietic cells but not on hematopoietic stem cells or multipotent hematopoietic progenitors (4, 6). Among dendritic cells (DC), CD48 is selectively expressed on circulating myeloid DC and resident bone marrow and thymus DC (7). CD2, 2B4, and heparan sulfate function as CD48 ligands (8-10). CD48 is competent to transduce signals and can also trigger signaling through CD2 or 2B4 (8, 11). CD48-CD2 interactions promote T cell activation and class switching to IgG2a in B cells (8, 12). High affinity CD48-2B4 interactions can either promote or inhibit NK cell and cytotoxic T cell (CTL) activation (7, 11, 13, 14). CD48-2B4 ligation does not directly trigger CTL activity but enhances signaling from the T cell receptor (13). CD48-2B4 mediated inhibition of NK cell activity is distinct from MHC I-restricted mechanisms (15). CD48 expressed on NK cells is co-activating, whereas CD48 expressed on other cell types inhibits NK cell activation (14). Both CD48 expressing and non-expressing cells can be targets of NK cell or CTL-mediated lysis (13, 16). Our Avi-tag Biotinylated human CD48 features biotinylation at a single site contained within the Avi-tag, a unique 15 amino acid peptide. Protein orientation will be uniform when bound to streptavidin-coated surface due to the precise control of biotinylation and the rest of the protein is unchanged so there is no interference in the protein's bioactivity.

References:

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