

Active Recombinant Human CD276 protein, Fc/Avi-tagged, Biotinylated

Cat. No. CD276-051H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Biotinylated Recombinant Human CD276(Leu29-Thr461) protein, fused to Fc/Avi tag at the C-terminus, was expressed in CHO cells .
Species	Human
Source	CHO
ProteinLength	Leu29-Thr461
Description	Human B7 homolog 3 (B7-H3), also known as CD276, is a member of the B7 family of immune checkpoint molecules, responsible for regulating immune responses (1-3). There are at least seven structurally related B7 family members, all sharing about 20-40% amino acid (aa) sequence identity (4). The B7 protein family are immunoglobulin (Ig) superfamily members with varying numbers of Ig-V-like and Ig-C-like regions in the extracellular domain (ECD) and they can either be glycosylphosphatidylinositol (GPI)-linked or transmembrane (4). The mature ECD of B7-H3 contains two V-like and two C-like Ig domains, a transmembrane region, and a short cytoplasmic domain. An isoform of human B7-H3 containing only a single set of V-like and C-like Ig domains in the ECD has also been identified (1, 5). The ECD of both mouse and rat B7-H3 only contain a single set of V-like and C-like Ig domains. Human B7-H3 is not expressed on resting B cells, T cells, monocytes or dendritic cells, but is induced on dendritic cells and monocytes by inflammatory cytokines (1, 6). B7-H3 is also overexpressed in

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numerous cancers including bladder, breast and melanoma (7). Unlike other B7 family members, human B7-H3 does not bind any known members of the CD28 family of immunoreceptors and its receptor has yet to be identified. However, B7-H3 has been shown to bind an unidentified counter-receptor on activated T cells to co-stimulate the proliferation of CD4⁺ or CD8⁺ T cells (8). B7-H3 has also been found to enhance the induction of primary cytotoxic T lymphocytes and stimulate IFN-gamma production (1-3, 8).

Predicted N Terminal	Leu29
Form	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose.
Bio-activity	The biotin to protein ratio is greater than 0.7 as determined by the HABA assay. Measured by its ability to inhibit anti-CD3 antibody induced IL-2 or IFN-gamma secretion by human T cells. The ED50 for this effect is 0.1-1 µg/mL. Measured by its binding ability in a functional ELISA. When Human CD276 Antibody is immobilized at 0.5 µg/mL, 100 µL/well, the concentration of Biotinylated Recombinant CD276 Fc Chimera Avi-tag that produces 50% of the optimal binding response is approximately 10-60 ng/mL.
Molecular Mass	104-120 kDa, under reducing conditions
Endotoxin	<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.
Applications	Binding Activity, Bioactivity
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from

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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.

Reconstitution Reconstitute at 200 µg/mL in PBS.

Conjugation Biotin

GENE INFORMATION

Gene Name CD276 CD276 molecule [Homo sapiens]

Official Symbol CD276

Synonyms CD276; CD276 molecule; CD276 antigen; B7 H3; B7H3; B7RP 2; B7 homolog 3; costimulatory molecule; B7-H3; B7RP-2; 4lg-B7-H3;

Gene ID 80381

mRNA Refseq NM_001024736

Protein Refseq NP_001019907

MIM 605715

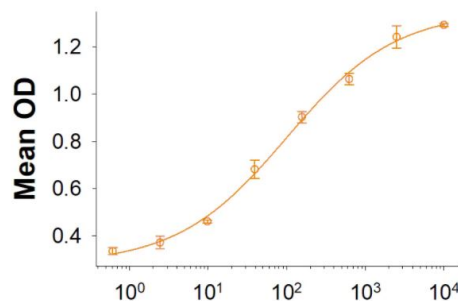
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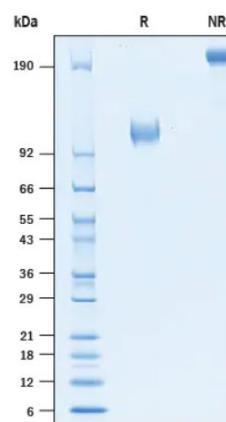
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Binding Activity



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.