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

Cat. No. CD276-056H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Biotinylated Recombinant Human CD276(Leu29-Thr461) protein, fused to His/Avi tag at the C-terminus, was expressed in HEK293 cells .
Species	Human
Source	HEK293
ProteinLength	Leu29-Thr461
Description	CD276 is a member of the B7 family of immune proteins that provide signals for the regulation of immune responses (1 - 3). Other family members include B7-1, B7-2, B7-H1/PD-L1, B7-H2, and PD-L2. B7 family proteins are type I transmembrane immunoglobulin (Ig) superfamily members that contain extracellular Ig V-like and Ig C-like domains with a short cytoplasmic tail. Among the family members there is about 20 - 40% amino acid (aa) sequence identity. B7-H3 was initially reported to be a 316 aa type I transmembrane precursor protein that contained a signal sequence, an extracellular region with one V-type and one C-type Ig domain, a transmembrane segment and a short cytoplasmic tail (1). Subsequent studies have identified a second 110 kDa form whose precursor is 534 aa in length. Termed 4IgB7-H3 or B7-H3b, this molecule has two additional Ig-like domains (one V-type and one C-type) and shows a ubiquituous expression pattern (4, 5). It would appear that the human 4Ig form is the principal, if not the only form of B7-H3 (5). Its precursor contains a 26 aa signal sequence, a 435 aa extracellular

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	region, a 31 aa transmembrane domain, and a 42 aa cytoplasmic tail. The four Ig-like domains alternate between V-type and C-type, and apparently are the consequence of a V-C type tandem duplication (4, 5). B7-H3b is expressed on dendritic cells as well as activated T, B and NK cells (5). The mouse gene differs from that of human in that it cannot code for four Ig-like domains; only a V-type:C-type pair (4). Human B7-H3b binding to an undefined receptor has shown to be inhibitory to NK cells and cytokine release (6). It also seems to be required for late stage osteoblast differentiation (7).
Predicted N Terminal	Leu29
Form	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose.
Bio-activity	Measured in a cell proliferation assay using mouse CD4+ cells in the presence of anti-CD3. The ED50 for this effect is 3-12 μg/mL. Measured by its binding ability in a functional ELISA. When Human CD276 Antibody is immobilized at 1.0 μg/mL, 100 μL/well, the concentration of Biotinylated Recombinant Human CD276 His-tag Avi-tag that produces 50% of the optimal binding response is approximately 3 -15 ng/mL.
Molecular Mass	70-90 kDa, under reducing conditions
Endotoxin	<1.0 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	Bioactivity
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

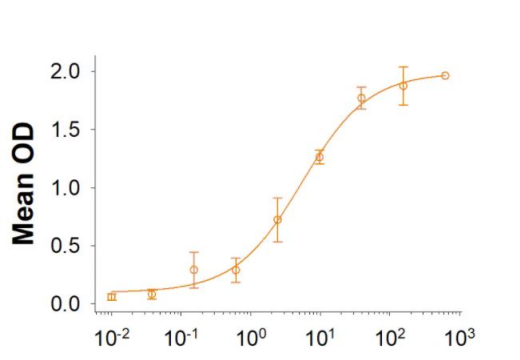
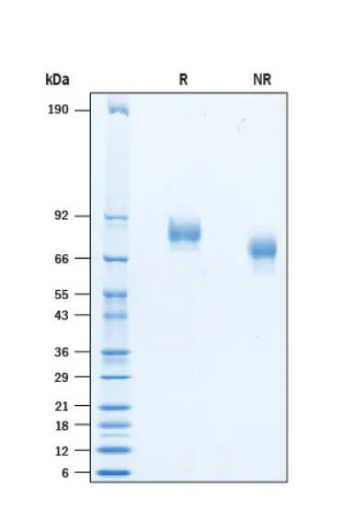
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	after reconstitution.3 months, -20 to -70 °C under sterile conditions after reconstitution.
Reconstitution	Reconstitute at 200 μg/mL in PBS.
Conjugation	Biotin

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; 4Ig-B7-H3;
Gene ID	80381
mRNA Refseq	NM_001024736
Protein Refseq	NP_001019907
MIM	605715
UniProt ID	Q5ZPR3

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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.

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