CD276 Human Recombinant Protein

PRODUCT OVERVIEW

Product Name	CD276, Recombinant Protein
Full Product Name	Recombinant Human CD276
Product Gene Name	CD276 recombinant protein
Sequence	LEVQVPEDPV VALVGTDATL CCSFSPEPGF SLAQLNLIWQ LTDTKQLVHS FAEGQDQGSA YANRTALFPD LLAQGNASLR LQRVRVADEG SFTCFVSIRD FGSAAVSLQV AAPYSKPSMT LEPNKDLRPG DTVTITCSSY QGYPEAEVFW QDGQGVPLTG NVTTSQMANE QGLFDVHSIL RVVLGANGTY SCLVRNPVLQ QDAHSSVTIT PQRSPTGAVE VQVPEDPVVA LVGTDATLRC SFSPEPGFSL AQLNLIWQLT DTKQLVHSFT EGRDQGSAYA NRTALFPDLL AQGNASLRLQ RVRVADEGSF TCFVSIRDFG SAAVSLQVAA PYSKPSMTLE PNKDLRPGDT VTITCSSYRG YPEAEVFWQD GQGVPLTGNV TTSQMANEQG LFDVHSVLRV VLGANGTYSC LVRNPVLQQD AHGSVTITGQ PMTFPPEALE HHHHHH
Host	Sf9, Baculovirus cells
Form/Format	Liquid CD276 protein solution (0.5mg/ml) contains Phosphate buffered saline (pH7.4) and 10% glycerol.
Purity/Purification	Greater than 90.0% as determined by: Analysis by SDS-PAGE.
Preparation and Storage	Store at 4 degree C if entire vial will be used within 2-4 weeks. Store, frozen at -20 degree C for longer periods of time. For long term storage, it is recommended to add a carrier protein (0.15% HSA or BSA). Avoid multiple freeze-thaw cycles.
Molecular Weight	57,235 Da
Chromosome Location	Chromosome: 15; NC_000015.9 (73976622..74006859). Location: 15q23-q24
OMIM	605715
3D Structure	ModBase 3D Structure for Q5ZPR3
Species	Human
Related Product Information for CD276 recombinant protein	CD276, belongs to the B7 family of immunoregulatory transmembrane glycoproteins expressed by T cells. CD276 is a costimulatory molecule for T cell activation in addition to IFN-gamma production. Furthermore CD276 upregulates BRCC3 expression, preventing DNA defects caused by 5-Fu. CD276 is correlated with TNM stage of NSCLC and act as a potential biomarker for NSCLC-derived MPEs. CD276 inhibits natural-killer mediated cell lysis in tumor cells, and act as a marker for detection of neuroblastoma cells. CD276 is implicated in the development of acute as well as chronic transplant rejection and in the regulation of lymphocytic activity at mucosal surfaces. In addition, CD276 provides the placenta & fetus a proper immunological environment during the course of pregnancy. CD276 Human Recombinant produced in Sf9 Baculovirus cells is a single, glycosylated polypeptide chain containing 446 amino acids (29-466a.a.) and having a molecular mass of 48.1kDa (Molecular size on SDS-PAGE will appear at approximately 50-70kDa). CD276 is expressed with an 8 amino acid His tag at C-Terminus and purified by proprietary chromatographic techniques.
Other Notes	Small volumes of CD276 recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for CD276 purchase	MBS556368 is a recombinant protein targeting CD276. Also known as Recombinant Human CD276. Host: Sf9, Baculovirus cells.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CD276. It may not necessarily be applicable to this product.

NCBI GI #	52694705
NCBI GeneID	80381
NCBI Accession #	CAE47548.1
UniProt Primary Accession #	Q5ZPR3
UniProt Secondary Accession #	Q6P5Y4; Q6UXI2; Q8NBI8; Q8NC34; Q8NCB6; Q9BXR1
UniProt Related Accession #	Q5ZPR3
NCBI Official Full Name	B7-H3 protein
NCBI Official Synonym Full Names	CD276 molecule
NCBI Official Symbol	CD276
NCBI Official Synonym Symbols	B7H3; B7-H3; B7RP-2; 4Ig-B7-H3
UniProt Protein Name	CD276 antigen
UniProt Synonym Protein Names	4Ig-B7-H3; B7 homolog 3; B7-H3; Costimulatory molecule
Protein Family	CD276 antigen
UniProt Gene Name	CD276
UniProt Synonym Gene Names	B7H3; B7-H3
UniProt Entry Name	CD276_HUMAN
NCBI Protein Information	CD276 antigen; B7 homolog 3; costimulatory molecule
NCBI Summary for CD276	The protein encoded by this gene belongs to the immunoglobulin superfamily, and thought to participate in the regulation of T-cell-mediated immune response. Studies show that while the transcript of this gene is ubiquitously expressed in normal tissues and solid tumors, the protein is preferentially expressed only in tumor tissues. Additionally, it was observed that the 3' UTR of this transcript contains a target site for miR29 microRNA, and there is an inverse correlation between the expression of this protein and miR29 levels, suggesting regulation of expression of this gene product by miR29. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Sep 2011]
UniProt Comments for CD276	CD276: May participate in the regulation of T-cell-mediated immune response. May play a protective role in tumor cells by inhibiting natural-killer mediated cell lysis as well as a role of marker for detection of neuroblastoma cells. May be involved in the development of acute and chronic transplant rejection and in the regulation of lymphocytic activity at mucosal surfaces. Could also play a key role in providing the placenta and fetus with a suitable immunological environment throughout pregnancy. Both isoform 1 and isoform 2 appear to be redundant in their ability to modulate CD4 T-cell responses. Isoform 2 is shown to enhance the induction of cytotoxic T-cells and selectively stimulates interferon gamma production in the presence of T-cell receptor signaling. Belongs to the immunoglobulin superfamily. BTN/MOG family. 4 isoforms of the human protein are produced by alternative splicing. Protein type: Membrane protein, integral Chromosomal Location of Human Ortholog: 15q23-q24 Cellular Component: integral to membrane; external side of plasma membrane Molecular Function: protein binding; receptor binding Biological Process: cell proliferation; positive regulation of osteoblast differentiation; regulation of immune response; negative regulation of T cell proliferation; T cell activation; negative regulation of inflammatory response; negative regulation of interleukin-2 biosynthetic process; positive regulation of T cell proliferation; immune response; positive regulation of bone mineralization; positive regulation of interferon-gamma biosynthetic process; negative regulation of interferon-gamma biosynthetic process

Research Articles on CD276	**1.** Data suggest that the immunomodulatory proteins B7-H1, B7-H3, and HLA-G5 are secreted from early and term placenta via exosomes and have important implications in mechanisms by which trophoblast immunomodulators modify maternal immunological milieu.
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