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B7H3 Antibody [7B3]

Catalog # ASC12174

Product Information

Application	IHC-P, IF, ICC, E
Primary Accession	Q5ZPR3
Other Accession	NP_001019907
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1,k
Clone Names	CD276
Calculated MW	57235

Additional Information

Gene ID	80381
Alias Symbol	CD276
Other Names	B7-H3 Antibody: CD276 molecule, B7H3, B7RP-2, 4Ig-B7-H3, CD276
Reconstitution & Storage	B7-H3 antibody can be stored at 4˚C for three months and -20˚C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	B7H3 Antibody [7B3] is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CD276
Synonyms	B7H3
Function	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.
Cellular Location	Membrane; Single-pass type I membrane protein
Tissue Location	Ubiquitous but not detectable in peripheral blood lymphocytes or

granulocytes. Weakly expressed in resting monocytes Expressed in dendritic cells derived from monocytes. Expressed in epithelial cells of sinonasal tissue. Expressed in extravillous trophoblast cells and Hofbauer cells of the first trimester placenta and term placenta.

Background

CD276, also known as B7-H3, was initially identified as a member of the B7 family of proteins through its homology with previously identified B7 molecules (1). CD276 mRNA is widely expressed, but its protein expression is usually rather low (2). CD276 has been shown to play a role in both the costimulation as well as the coinhibition of T cell response (3). In a similar fashion, CD276 plays a critical role in the control of antitumor immune responses in some cases, while in others appears to mediate antitumor immunity (4). It thus joins other immune checkpoint proteins as a possible therapeutic target for at least a subset of cancers.

References

Chapoval AI, Ni J, Lau JS, et al. B7-H3: a costimulatory molecule for T cell activation and IFN-gamma production. Nat Immunol 2001; 2:269-74.Sun M, Richards S, Prasad DV, et al. Characterization of mouse and human B7-H3 genes. J Immunol 2002; 168:6294-7.Yi KH and Chen L. Fine tuning the immune response through B7-H3 and B7-H4. Immunol Rev 2009; 229:145-51.Wang L, Kang FB, and Shan BE. B7-H3-mediated tumor immunology: friend or foe?. Int J Cancer 2014; 134:2764-71.