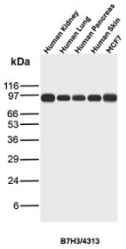
B7-H3 Antibody B7H3/4313 / CD276 Mouse Monoclonal Antibody [clone B7H3/4313] (V4375)

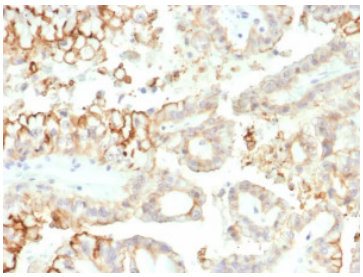
Catalog No.	Formulation	Size
V4375-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4375-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4375SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

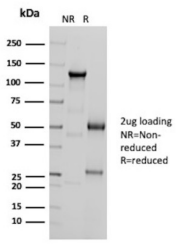
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	B7H3/4313
Purity	Protein A/G affinity
UniProt	Q5ZPR3
RRID	AB_3758770
Localization	Cytoplasm, Cell surface
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 minutes at RT Western blot: 2-4ug/ml
Limitations	This B7-H3 Antibody B7H3/4313 / CD276 Mouse Monoclonal Antibody is available for research use only.



B7-H3 Antibody B7H3/4313 WB Analysis of Human Kidney, Lung, Pancreas, Skin and MCF-7 Cells. Western blot analysis of human kidney, lung, pancreas, and skin tissue lysates, along with MCF-7 cell lysate, using CD276 Mouse Monoclonal Antibody clone B7H3/4313. Prominent immunoreactive bands are detected at approximately 80-90 kDa across the five samples. CD276 is a heavily glycosylated transmembrane protein whose apparent molecular weight may exceed that predicted from its amino acid sequence. The observed bands fall within the reported molecular weight range of glycosylated B7-H3.



B7-H3 Antibody B7H3/4313 IHC Analysis of Human Kidney Carcinoma Tissue. Immunohistochemical analysis of formalin-fixed, paraffin-embedded human kidney carcinoma tissue using CD276 Mouse Monoclonal Antibody clone B7H3/4313 at 2 ug/ml. Prominent brown DAB staining is observed in malignant epithelial structures, with membranous and cytoplasmic immunoreactivity. Heat-induced epitope retrieval (HIER) was performed by boiling tissue sections in 10 mM Tris/1 mM EDTA buffer (pH 9.0) for 20 minutes, followed by cooling before antibody incubation.



B7-H3 Antibody B7H3/4313 SDS-PAGE Analysis of Purified Antibody. SDS-PAGE analysis of purified CD276 Mouse Monoclonal Antibody clone B7H3/4313 under non-reducing (NR) and reducing (R) conditions, with 2 ug of antibody loaded per lane. The non-reduced sample shows a prominent band at approximately 150 kDa, consistent with intact IgG. Under reducing conditions, bands corresponding to the antibody heavy chain (~50 kDa) and light chain (~25 kDa) are observed, demonstrating the expected immunoglobulin subunit pattern.

Description

B7-H3 Antibody B7H3/4313 / CD276 Mouse Monoclonal Antibody recognizes B7-H3, a type I transmembrane glycoprotein encoded by the CD276 gene and belonging to the B7 family of immunoregulatory proteins. B7-H3 contains extracellular immunoglobulin-like domains, a transmembrane segment, and a short cytoplasmic tail. Two-domain and four-domain forms have been described, with the four-domain form predominating in humans. Extensive glycosylation contributes to the protein's apparent molecular weight and may influence its stability and interactions at the cell surface.

B7 family proteins participate in the regulation of immune responses through interactions with receptors expressed by lymphocytes and other immune cells. B7-H3 was initially characterized as a costimulatory molecule capable of enhancing T-cell proliferation and interferon-gamma production. Subsequent investigations identified inhibitory effects on T-cell activation and cytokine secretion in certain experimental settings. These findings suggest that CD276 has context-dependent immunoregulatory functions. Although several potential binding partners have been proposed, its principal physiological receptor and the mechanisms governing its contrasting immune effects remain incompletely established.

CD276 has attracted considerable attention in cancer biology because elevated expression has been reported in numerous malignancies, including prostate, breast, ovarian, lung, and colorectal cancers. Expression may occur in malignant epithelial cells as well as tumor-associated stromal and vascular compartments. In several cancer types, increased B7-H3 abundance has been associated with aggressive pathological characteristics, metastatic progression, and unfavorable clinical outcomes. However, the strength and significance of these associations vary according to tumor type and experimental context.

Beyond its potential effects on immune surveillance, B7-H3 has been implicated in cellular migration, invasion, metabolic adaptation, and resistance to stress. Experimental studies suggest that CD276 may influence tumor-associated signaling pathways and interactions within the tumor microenvironment. These functions remain under investigation, and their molecular mechanisms have not been fully resolved.

The distribution of B7-H3 in malignant tissues has encouraged development of investigational therapeutic approaches, including monoclonal antibodies, antibody-drug conjugates, and engineered cellular therapies. B7-H3 Antibody B7H3/4313 provides a means of examining this tumor-associated glycoprotein and investigating its relationship to immune regulation, malignant progression, and cellular interactions within the tumor microenvironment.

For additional characterization of this tumor-associated immunoregulatory protein, see our CD276 Antibody B7H3/4345, a mouse monoclonal antibody supported by immunohistochemistry, western blot, and human protein microarray specificity data.

Application Notes

Optimal dilution of the B7-H3 Antibody B7H3/4313 / CD276 Mouse Monoclonal Antibody should be determined by the researcher.

Immunogen

A recombinant partial protein sequence (within amino acids 100-300) from the human protein was used as the immunogen for the B7-H3 antibody.

Storage

Aliquot the B7-H3 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

CD276 antibody, B7 homolog 3 antibody, B7 homologue 3 antibody, B7RP-2 antibody, B7H3 antibody, CD276 protein antibody, B7-H3 monoclonal antibody

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