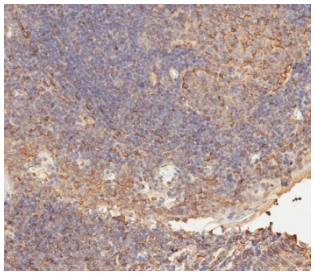
CD276 Rabbit Polyclonal Antibody / B7-H3 Immunoregulatory Protein Antibody (F54367)

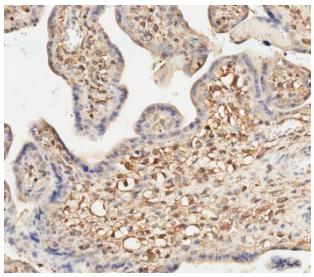
Catalog No.	Formulation	Size
F54367-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F54367-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

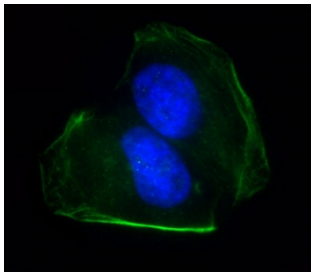
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
UniProt	Q5ZPR3
Localization	Cell membrane
Applications	Western blot: 1:500-1:2000 Flow cytometry: 1:25 (1x10e6 cells) Immunofluorescence: 1:25 Immunohistochemistry (FFPE): 1:25
Limitations	This CD276 Rabbit Polyclonal Antibody / B7-H3 Immunoregulatory Protein Antibody is available for research use only.



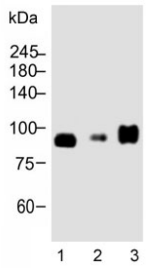
CD276 Rabbit Polyclonal Antibody IHC Analysis of Human Tonsil Tissue. Immunohistochemical analysis of formalin-fixed, paraffin-embedded human tonsil tissue using B7-H3 Immunoregulatory Protein Antibody. Brown DAB staining is observed throughout portions of the lymphoid tissue, with heterogeneous immunoreactivity and stronger staining in selected cellular regions. Heat-induced epitope retrieval (HIER) was performed by steaming tissue sections in EDTA buffer (pH 9.0) for 20 minutes, followed by cooling before antibody incubation.



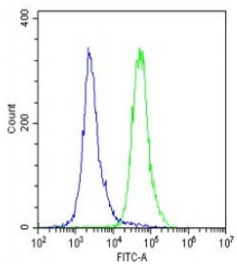
CD276 Rabbit Polyclonal Antibody IHC Analysis of Human Placenta Tissue. Immunohistochemical analysis of formalin-fixed, paraffin-embedded human placenta tissue using B7-H3 Immunoregulatory Protein Antibody. Prominent brown DAB staining is observed in placental villous structures, including trophoblastic cells and surrounding tissue regions, with membranous and cytoplasmic immunoreactivity. Heat-induced epitope retrieval (HIER) was performed by steaming tissue sections in EDTA buffer (pH 9.0) for 20 minutes, followed by cooling before antibody incubation.



CD276 Rabbit Polyclonal Antibody IF Analysis of Human U-2 OS Cells. Immunofluorescence analysis of fixed and permeabilized human U-2 OS cells using B7-H3 Immunoregulatory Protein Antibody. Green fluorescence is observed along the cell periphery and within portions of the cytoplasm, consistent with membranous and intracellular CD276 immunoreactivity. DAPI nuclear counterstaining is shown in blue.



CD276 Rabbit Polyclonal Antibody WB Analysis of Human LNCaP, U-2 OS and MCF-7 Cells. Western blot analysis of human LNCaP (lane 1), U-2 OS (lane 2), and MCF-7 (lane 3) cell lysates using B7-H3 Immunoregulatory Protein Antibody. Immunoreactive bands are detected at approximately 90-100 kDa in all three samples, with the strongest signal observed in MCF-7 lysate. CD276 is a heavily glycosylated transmembrane protein with a reported apparent molecular weight range of approximately 57-110 kDa, depending on glycosylation.



CD276 Rabbit Polyclonal Antibody FACS Staining of Human U-2 OS Cells. Flow cytometry analysis of fixed and permeabilized human U-2 OS cells using B7-H3 Immunoregulatory Protein Antibody. The antibody-stained population (green) demonstrates a pronounced rightward fluorescence shift relative to the isotype control (blue), indicating CD276 immunoreactivity in the tested cells. The assay was performed on fixed and permeabilized cells and does not establish antibody performance in live-cell surface staining.

Description

CD276 Rabbit Polyclonal Antibody / B7-H3 Immunoregulatory Protein Antibody recognizes CD276, also known as B7-H3, a type I transmembrane glycoprotein belonging to the B7 family of immune regulatory proteins. CD276 contains extracellular immunoglobulin-like domains, a transmembrane segment, and a short intracellular tail. Two-domain and four-domain forms have been described, with the four-domain form predominating in humans. Extensive glycosylation influences the protein's apparent molecular weight and may contribute to its stability and molecular interactions at the cell surface.

B7-H3 participates in complex interactions involving immune cells and their surrounding tissue environment. Early investigations suggested that CD276 could enhance T-cell proliferation and interferon-gamma production, whereas subsequent studies reported inhibitory effects on T-cell activation and cytokine secretion. These contrasting observations indicate that its immunoregulatory activity depends on cellular context and experimental conditions. Although several potential binding partners have been proposed, the principal physiological receptor responsible for B7-H3 signaling remains incompletely established.

CD276 expression has been documented in numerous malignancies, including prostate, breast, ovarian, lung, and colorectal cancers. The protein may be expressed by malignant cells as well as tumor-associated stromal and vascular

compartments. In several cancer types, increased B7-H3 expression has been associated with aggressive pathological characteristics, metastatic potential, and unfavorable clinical outcomes. However, these associations vary among tumor types and do not necessarily establish a direct causal relationship between CD276 abundance and disease progression.

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 signaling pathways associated with tumor growth and interactions within the tumor microenvironment. The molecular mechanisms underlying these activities remain subjects of ongoing investigation, particularly because the protein's intracellular region lacks well-characterized signaling motifs.

The distribution of B7-H3 in malignant tissues has generated considerable interest in its potential as a therapeutic target. Investigational approaches include monoclonal antibodies, antibody-drug conjugates, and engineered cellular therapies directed against CD276-expressing cells. CD276 Rabbit Polyclonal Antibody provides a means of examining this immunoregulatory glycoprotein and investigating its relationship to tumor biology, immune interactions, and the molecular characteristics of malignant tissues.

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

The stated application concentrations are suggested starting points. Titration of the CD276 Rabbit Polyclonal Antibody / B7-H3 Immunoregulatory Protein Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 493-522 from the human protein was used as the immunogen for the CD276 antibody.

Storage

Aliquot the CD276 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

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

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