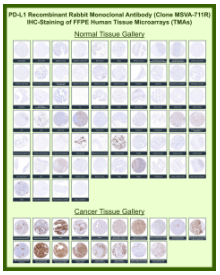
CD274 Antibody for IHC / CD274 molecule / PD-L1 [clone MSVA-711R] (V6082)

Catalog No.	Formulation	Size
V6082-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V6082-20UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug

Recombinant RABBIT MONOCLONAL

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	MSVA-711R
UniProt	Q9NZQ7
Localization	Cell membrane, Early endosome membrane, Endomembrane system, Recycling endosome membrane
Applications	Immunohistochemistry (FFPE) : 1:100-1:200
Limitations	This CD274/CD274 molecule antibody is available for research use only.



IHC analysis of CD274 antibody in human tissue microarrays. CD274 Antibody for IHC (clone MSVA-711R) was evaluated by immunohistochemistry on FFPE human tissue microarrays representing a broad panel of normal tissues and tumor specimens. The rabbit monoclonal antibody highlights membranous and cytoplasmic staining patterns consistent with the known distribution of Programmed death-ligand 1 (PD-L1 / CD274), an immune checkpoint ligand expressed on epithelial cells and immune cell populations. Most normal tissues show minimal or absent staining, while selected immune-rich tissues display detectable signal in lymphoid cell populations. In tumor samples, variable membranous staining is observed in several carcinomas, consistent with the role of PD-L1 in tumor immune evasion and immune checkpoint signaling. The observed staining patterns across tissues align with published expression data reported in the Human Protein Atlas.

Description

CD274 antibody, also known as Programmed death-ligand 1 antibody and B7-H1 antibody, recognizes CD274, an

immune regulatory cell surface protein commonly referred to as PD-L1. CD274 Antibody for IHC (clone MSVA-711R) targets this transmembrane immunomodulatory molecule encoded by the CD274 gene, which is widely studied for its role in immune checkpoint signaling and tumor immune evasion. CD274, often called PD-L1 or B7 homolog 1 (B7-H1), is expressed on a variety of immune and epithelial cell types and is particularly relevant in the tumor microenvironment where it contributes to suppression of T cell activation. Because of this biology, CD274 antibody detection is frequently used in research examining immune regulation, tumor immunology, and epithelial cell signaling in normal and malignant tissues.

CD274 is a member of the B7 family of immune regulatory ligands and functions primarily through interaction with the inhibitory receptor PD-1, encoded by the PDCD1 gene, on activated T lymphocytes. When PD-L1 binds PD-1, downstream signaling pathways reduce T cell proliferation, cytokine production, and cytotoxic activity. This immune checkpoint mechanism plays an essential role in maintaining peripheral immune tolerance and preventing excessive immune activation. However, many tumors exploit this pathway by upregulating PD-L1 expression, thereby suppressing anti-tumor immune responses. For this reason, PD-L1 antibody reagents are widely used to study immune checkpoint signaling, tumor immune escape mechanisms, and inflammatory signaling pathways in epithelial and immune cell populations.

CD274 is located on chromosome 9p24.1 and encodes a type I transmembrane glycoprotein containing immunoglobulin-like domains characteristic of B7 family members. The protein is normally expressed on antigen-presenting cells such as macrophages and dendritic cells, as well as on some epithelial and endothelial cells. Expression can be strongly induced by inflammatory cytokines, particularly interferon-gamma, which stimulates transcriptional upregulation of PD-L1 during immune activation. In cancer biology, increased PD-L1 expression is frequently observed in tumor epithelial cells and tumor-associated immune cells, linking CD274 to regulation of immune responses within the tumor microenvironment.

Several strong literature synonyms are commonly used for this protein, including PD-L1, Programmed death-ligand 1, B7-H1, and PDCD1 ligand 1. Integrating these established names helps ensure clear identification of the CD274 immune checkpoint molecule across immunology, oncology, and pathology research. In tissue-based studies, CD274 antibody staining is commonly evaluated in epithelial tumor cells and infiltrating immune cells where membranous localization reflects the cell surface distribution of PD-L1. Clone MSVA-711R is a rabbit monoclonal antibody designed to recognize CD274 protein expression in formalin-fixed tissue contexts relevant to immune checkpoint research. This CD274 antibody is available from NSJ Bioreagents for investigators studying tumor immunology, immune checkpoint biology, and epithelial immune interactions.

Application Notes

1. Optimal dilution of the CD274 antibody for IHC should be determined by the researcher.

2. This CD274/CD274 molecule antibody is recombinantly produced by expression in CHO cells.

3. Manual Protocol: Freshly cut sections should be used (less than 10 days between cutting and staining). Heat-induced antigen retrieval for 5 minutes in an autoclave at 121oC in pH 7.8 Target Retrieval Solution buffer. Apply the antibody at a dilution of 1:150 at 37oC for 60 minutes. Visualization of bound antibody by the EnVision Kit (Dako, Agilent) according to the manufacturer's directions.

Immunogen

KLH-conjugated linear peptide corresponding to human PD-L1 was used as the immuongen for the CD274/CD274 molecule antibody.

Storage

CD274/CD274 molecule antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.

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