IgD Heavy Chain Antibody for IHC / IGHD Antibody [clone MSVA-701R] (V6088)

Catalog No.	Formulation	Size
V6088-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V6088-20UG	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-701R
UniProt	P01880
Localization	Cytoplasm
Applications	Immunohistochemistry (FFPE): 1:100-1:200
Limitations	This IgD Heavy Chain Antibody for IHC / IGHD Antibody is available for research use only.



IgD Heavy Chain Antibody for IHC Tissue Microarray (TMA). Immunohistochemistry analysis of Immunoglobulin D heavy chain / IGHD in formalin-fixed paraffin-embedded human normal and cancer tissue microarrays using rabbit monoclonal antibody clone MSVA-701R. Tissue microarray (TMA) staining with HRP-DAB brown chromogen demonstrates membranous and cytoplasmic localization in IgD-positive B lymphocytes, with prominent staining in mantle zone B cells of tonsil, lymph node, and spleen, while most non-lymphoid tissues remain largely negative. Within tumor tissue microarrays, staining is primarily observed in infiltrating B lymphocytes within the tumor microenvironment rather than tumor epithelial cells. Evaluation across large TMA panels enables direct comparison of IGHD expression across diverse tissue types under standardized conditions. The observed staining patterns align with reported IgD expression profiles in the Human Protein Atlas and support its use as a marker of mature naive B cell populations.

Description

Immunoglobulin D (IgD) is an antibody isotype expressed primarily on the surface of mature naive B lymphocytes and

plays an important role in B cell activation and immune regulation. The IgD heavy chain is encoded by the IGHD gene and forms part of the B cell receptor complex together with immunoglobulin light chains. IgD Heavy Chain Antibody for IHC is used to detect this immunoglobulin component in tissue sections, enabling visualization of IgD-expressing B cell populations within lymphoid organs and immune infiltrates.

IgD belongs to the immunoglobulin superfamily and is structurally composed of two delta heavy chains paired with two light chains, forming a monomeric antibody molecule. Membrane-bound IgD functions as an antigen receptor on mature B cells where it cooperates with surface IgM to regulate B cell activation, antigen recognition, and signaling. Engagement of the B cell receptor containing IgD can initiate intracellular signaling cascades that influence lymphocyte survival, differentiation, and antibody production.

In normal human tissues, IgD expression is most prominently detected in B lymphocytes within secondary lymphoid organs such as tonsil, lymph node, and spleen. Within lymphoid follicles, IgD positive B cells are typically enriched in mantle zone regions surrounding germinal centers. This characteristic distribution makes IgD immunohistochemical staining a useful tool for evaluating lymphoid tissue architecture and identifying specific B cell subsets within reactive or neoplastic lymphoid proliferations.

IgD heavy chain antibody detection can also provide diagnostic information in hematopathology. Immunohistochemical staining for IgD may help characterize B cell lineage and maturation stage in certain lymphoid malignancies or plasma cell disorders. In research contexts, detection of IgD contributes to studies of B cell biology, antigen receptor signaling, and the organization of immune cell populations within lymphoid tissues.

A recombinant rabbit monoclonal IgD Heavy Chain Antibody for IHC such as clone MSVA-701R enables sensitive detection of IgD expressing cells in formalin-fixed paraffin-embedded tissue sections. Immunohistochemistry staining typically demonstrates membranous and cytoplasmic localization in B lymphocytes consistent with the distribution of IgD as part of the B cell receptor complex.

For detection of total human IgD, see our Recombinant Human IgD Antibody RM123 page.

This antibody is also part of a broader collection of IHC antibodies validated by tissue microarray analysis, supporting consistent staining across normal and cancer tissues.

Application Notes

1. Optimal dilution of the IgD Heavy Chain Antibody for IHC / IGHD Antibody (clone MSVA-701R) should be determined by the researcher.

2. This IGHD/Immunoglobulin heavy constant delta antibody is recombinantly produced by expression in human HEK293 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

A recombinant fragment (around amino acids 1-200) of human IGHD protein (exact sequence is proprietary) was used as the immunogen for the IgD Heavy Chain Antibody for IHC.

Storage

IgD Heavy Chain/IGHD antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.

Alternate Names

Immunoglobulin D heavy chain antibody, IGHD antibody, Human IgD antibody, Delta chain antibody

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