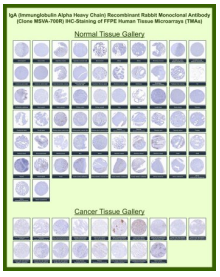
IGHA Antibody for IHC / Immunoglobulin alpha heavy chain [clone MSVA-700R] (V6087)

Catalog No.	Formulation	Size
V6087-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V6087-20UG	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-700R
UniProt	P01876, P01877
Localization	Cell membrane, Cytoplasm, Secreted
Applications	Immunohistochemistry (FFPE) : 1:100-1:200
Limitations	This IGHA Antibody for IHC / Immunoglobulin alpha heavy chain antibody is available for research use only.



IGHA Antibody for IHC Tissue Microarray (TMA). Immunohistochemistry analysis of Immunoglobulin alpha heavy chain IGHA in formalin-fixed paraffin-embedded human normal and cancer tissue microarrays using recombinant rabbit monoclonal IGHA antibody clone MSVA-700R. HRP-DAB brown cytoplasmic staining highlights IgA-producing plasma cells, consistent with the role of IGHA as the heavy chain component of immunoglobulin A antibodies. Positive plasma cell staining is most prominent in lymphoid and mucosa-associated tissues such as tonsil, gastrointestinal mucosa, and lymph node, reflecting the physiological distribution of IgA-secreting plasma cells in mucosal immunity. Many non-lymphoid tissues show minimal staining except for scattered plasma cells within stromal or inflammatory compartments. The observed staining pattern across normal and tumor tissues is consistent with reported IGHA expression profiles in the Human Protein Atlas.

Description

Immunoglobulin alpha heavy chain (IGHA) is a major component of immunoglobulin A (IgA), the predominant antibody

class involved in mucosal immunity. IGHA is encoded by the IGHA gene locus and forms the heavy chain of IgA immunoglobulins that are produced by differentiated B lymphocytes and plasma cells. Immunoglobulin A plays an essential role in immune defense at mucosal surfaces including the respiratory, gastrointestinal, and genitourinary tracts, where it helps neutralize pathogens and toxins. The IGHA Antibody for IHC Clone MSVA-700R recognizes the alpha heavy chain of IgA and is commonly used for immunohistochemical detection of IgA-producing plasma cells in human tissues.

IGHA antibody reagents are widely used in pathology and immunology research to identify plasma cell populations and to study humoral immune responses in lymphoid tissues and mucosal organs. IgA-producing plasma cells are commonly found in tissues such as tonsil, spleen, lymph node, and intestinal mucosa where they contribute to immune protection by secreting IgA antibodies that bind microbial antigens. Immunoglobulin A exists in two major subclasses, IgA1 and IgA2, which differ in their hinge regions and tissue distribution. Both subclasses contain the IGHA heavy chain and contribute to mucosal immune defense.

IgA antibodies function by binding pathogens and preventing microbial attachment to epithelial surfaces, thereby limiting infection and colonization. Secretory IgA, the form commonly present in mucosal secretions, is transported across epithelial cells via the polymeric immunoglobulin receptor and released into mucosal fluids such as saliva, tears, and intestinal secretions. Because IgA antibodies are abundant in mucosal tissues, IGHA expression is strongly associated with plasma cell infiltration in lymphoid follicles and mucosa-associated lymphoid tissue.

Immunohistochemical detection of IGHA is frequently used in diagnostic pathology to characterize plasma cell populations and to evaluate immunoglobulin expression patterns in lymphoid and plasma cell disorders. Increased numbers of IgA-positive plasma cells may be observed in inflammatory conditions, autoimmune diseases, and certain hematologic malignancies involving B cell or plasma cell differentiation. An IGHA antibody therefore provides a useful tool for examining humoral immune responses and identifying IgA-producing plasma cells in tissue sections, particularly in studies focused on mucosal immunity and lymphoid tissue architecture.

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 IGHA Antibody for IHC / Immunoglobulin alpha heavy chain should be determined by the researcher. It is reactive with both IgA1 and IgA2 subclasses of Alpha heavy chain.

2. This IGHA/Immunoglobulin heavy constant alpha 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

Full-length native protein (purified) corresponding to Human IgA was used as the immunogen for the IGHA / Immunoglobulin heavy constant alpha antibody.

Storage

IGHA / Immunoglobulin heavy constant alpha antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.

Alternate Names

IgA antibody, Immunoglobulin A antibody, Ig alpha heavy chain antibody, IGHA1 antibody, IGHA2 antibody