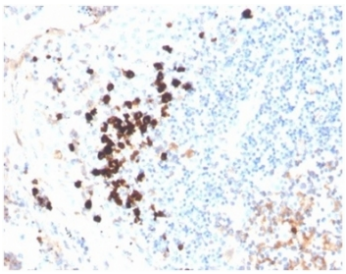
Human IgA Antibody Rabbit Monoclonal IGHA/3877R [clone IGHA/3877R] (V9557)

Catalog No.	Formulation	Size
V9557-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V9557-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V9557SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

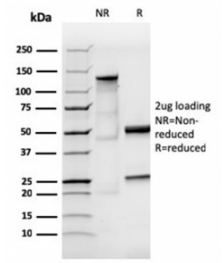
Recombinant RABBIT MONOCLONAL

Bulk quote request

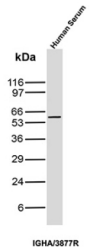
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	IGHA/3877R
Purity	Protein A/G affinity
UniProt	P01876, P01877
Localization	Cytoplasm, cell surface and secreted
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml Western Blot : 2-4ug/ml
Limitations	This human IgA antibody is available for research use only.



IHC Human IgA Antibody Rabbit Monoclonal IGHA/3877R in human tonsil. Immunohistochemistry analysis of Human IgA Antibody Rabbit Monoclonal IGHA/3877R in formalin-fixed paraffin-embedded human tonsil tissue. The rabbit monoclonal antibody (clone IGHA/3877R) produces strong cytoplasmic HRP-DAB brown staining in plasma cells within the tonsillar lymphoid tissue, consistent with expression of Immunoglobulin alpha heavy chain (IGHA), the heavy chain component of IgA antibodies produced by differentiated B cells. Positive cells are observed predominantly within lymphoid regions where IgA-secreting plasma cells reside, while surrounding lymphocytes show minimal staining. Antigen retrieval was performed by boiling tissue sections in pH 9 Tris-EDTA buffer (10mM Tris, 1mM EDTA) for 20 minutes followed by cooling prior to antibody incubation.



SDS-PAGE analysis of purified, BSA-free human IgA antibody (clone IGHA/3877R) as confirmation of integrity and purity.



Western blot Human IgA Antibody Rabbit Monoclonal IGHA/3877R in human serum. Human serum lysate was analyzed by western blot using Human IgA Antibody Rabbit Monoclonal IGHA/3877R. A band is detected at approximately 55-60 kDa, consistent with the predicted molecular weight of the Immunoglobulin alpha heavy chain (IGHA), which forms the heavy chain component of IgA antibodies. The detected band corresponds to the IgA heavy chain present in human serum immunoglobulins and reflects the expected migration of reduced IgA heavy chains in SDS-PAGE analysis.

Description

Immunoglobulin alpha heavy chain (IGHA) is the defining heavy chain component of immunoglobulin A (IgA), a major antibody class involved in mucosal immune defense. IGHA is encoded by the IGHA gene locus and forms the structural backbone of IgA antibodies produced by differentiated B lymphocytes and plasma cells. IgA antibodies are abundant in mucosal tissues and secretions where they provide a first line of immune protection against pathogens. The Human IgA Antibody Rabbit Monoclonal IGHA/3877R targets the alpha heavy chain of IgA and is commonly used to study IgA-producing plasma cells and antibody-mediated immune responses in lymphoid and mucosal tissues.

IgA antibody reagents are widely used in immunology and pathology research to detect Immunoglobulin A, also referred to as IgA or Immunoglobulin alpha heavy chain in the scientific literature. IgA exists as two subclasses, IgA1 and IgA2, both of which contain the IGHA heavy chain but differ in hinge region structure and distribution across tissues. These subclasses are produced by plasma cells located in mucosa-associated lymphoid tissues such as tonsils, lymph nodes, and intestinal mucosa where antibody secretion helps maintain mucosal immune defense.

Secretory IgA is generated when polymeric IgA antibodies are transported across epithelial cells via the polymeric immunoglobulin receptor. During this process the antibody is released into mucosal secretions as a dimeric complex that includes a secretory component which protects the antibody from enzymatic degradation. In mucosal environments such as the respiratory tract, gastrointestinal tract, and genitourinary tract, IgA antibodies bind pathogens and toxins, preventing microbial attachment and facilitating immune exclusion without triggering excessive inflammation.

Because IgA-producing plasma cells are widely distributed in mucosal and lymphoid tissues, a Human IgA antibody provides an important tool for examining humoral immune responses and identifying plasma cell populations in tissue sections. Detection of IGHA expression is useful in studies of mucosal immunity, lymphoid tissue organization, and immune responses associated with infection or inflammation. IgA-positive plasma cells may also be observed in inflammatory conditions and certain B cell or plasma cell disorders, making IGHA expression an informative marker for investigating antibody-mediated immune activity in tissue microenvironments.

Application Notes

Optimal dilution of the Human IgA Antibody Rabbit Monoclonal IGHA/3877R should be determined by the researcher. It is reactive with both IgA1 and IgA2 subclasses of Alpha heavy chain.

Immunogen

Recombinant full-length human IGHA1 and IGHA2 proteins were used as the immunogen for the human IgA antibody.

Storage

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

Alternate Names

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