## **Product Information**





## IgA1 (human) Rabbit Monoclonal Antibody - Biotinylated

Cat No: 32369 - 50 µg

## **General Data**

Shipping: dry ice

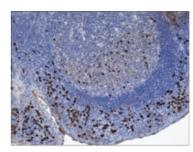
Formulation: 50 μg of protein-A affinity purified monoclonal antibody

Host: Rabbit

Antigen: Human IgA

Clone: RM124

Isotype: IgG



Immunohistochemical staining of human tonsil tissue using IgA1 (human) Rabbit Monoclonal Antibody - Biotinylated.

Application(s): ELISA, IHC, ICC

## **Product Overview**

Immunoglobulin A (IgA) is a member of the immunoglobulin superfamily of glycoproteins with roles in host defense against intestinal pathogens and both quantitative and qualitative control of host commensal microbiota composition. [53918,53919] Human IgA consists of two identical light chains of approximately 25 kDa each, as well as two heavy chains of approximately 60 kDa each that contain C-terminal extensions, known as tailpieces, which allow for IgA oligomerization. (53927,53925) There are two IgA subclasses, IgA1 and IgA2, which are encoded by IGHA1/α1 and IGHA2/α2, respectively, and have differences primarily in the hinge and heavy chain constant regions. [53925] IgA is produced by B cells and later secreted by plasma cells and is the most abundant antibody on mucosal surfaces that comprises at least 70% of all Ig produced in mice. [53918,53919] Monomeric IgA1 is predominant in the serum, but dimeric secretory IgA (SIgA) is the predominant form in mucosal surfaces and secretions with the ratio of subclasses varying based on the IgA-secreting cell types present. [53925,53921] Dimeric and polymeric IgA bind to Ig $\alpha$  Fc receptor I (Fc $\alpha$ RI) and the IgM- and IgA-binding high affinity Ig $\alpha$  and Ig $\mu$  Fc receptor (Fc $\alpha$ / $\mu$ -R), which are both involved in mediating immune responses. (53921,53922) Production of IgA is induced in the gut only in animals containing intestinal microbes, and the number of IgA-producing plasma cells is reduced in germ-free mice. (53918) The extended hinge region of IgA1 contains O-linked glycan side chains, which have altered galactosylation and form circulating immune complexes in patients with IgA neuropathy (IgAN), an autoimmune inflammatory disease characterized by IgA1-containing deposits in the glomerular mesangium, tea-colored urine, proteinuria, and, potentially, renal failure. (56183, 56184) IgA levels are increased in certain gastrointestinal tract and liver diseases, with IgA1 levels increased to a higher degree than IgA2 levels in patients with chronic hepatitis. [56183] Cayman's IgA1 (human) Rabbit Monoclonal Antibody - Biotinylated can be used for ELISA, immunocytochemistry (ICC), and immunohistochemistry (IHC) applications.

FP/22/24

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