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# Anti- IgA Antibody MSVA-700R / Recombinant Rabbit monoclonal

Human SwissProt	P01876 (IGHA1), P01877 (IGHA2)
Human Gene Symbol	IGHA1 & IGHA2
Synonyms	A2m Marker; Ig alpha 1 Chain C Region; Ig alpha 2 Chain C Region; IGHA1; IGHA2; Immunoglobulin Am1; Immunoglobulin Am2; Immunoglobulin Heavy Constant Alpha 1; Immunoglobulin Heavy Constant Alpha 2
Specificity	IgA
Immunogen	Recombinant full-length human IGHA1 and IGHA2 proteins
lsotype	Rabbit / IgG
Species Reactivity	Human

Localization	Cytoplasm, cell surface and secreted.
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non- hazardous. No MSD required.
Supplied As	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available without BSA
Positive Control	Tonsil: A strong staining should be seen in a fraction of plasma cells.
Negative Control	Tonsil: Lymphocytes should not stain for IgA.



IgA positive plasma cells are abundant in the duodenum mucosa.

IgA positive plasma cells are numerous in the tonsil.

Squamous cell carcinoma containing many IgA positive plasma cells in its stroma.

#### Biology

IgA (Immunoglobulin A) has two subclasses (IgA1 and IgA2). Both are heavily glycosylated proteins. IgA1 and IgA2 can occur as monomers or dimers. The IgA dimeric form is secreted and represents an important component of body fluids such as tears, saliva, sweat, colostrum and secretions from the genitourinary tract, gastrointestinal tract, prostate and respiratory epithelium. Mucosal membranes can produce large quantities of IgA. For example, 3-5 grams of IgA are secreted into the intestinal lumen each day. This makes up for up to 15% of total daily immunoglobulin production. The high prevalence of IgA in the mucus is a result of a cooperation between IgA producing plasma cells and mucosal epithelial cells that express polymeric immunoglobulin receptor (pIgR). IgA binds to the pIgR on the basolateral surface of epithelial cells, and is taken up into the cell via endocytosis. The receptor-IgA complex passes through the cellular compartments before being secreted on the luminal surface of the epithelial cells. IgA plays an important role in the immune function of mucous membranes. In normal tissues, a strong cytoplasmic IgA immunostaining occurs in a fraction of plasma cells. The percentage of IgA positive plasma cells varies between tissues and is particularly high in the mucosa of diverse organs. In gastrointestinal and other epithelia, a cytoplasmic IgA staining is sometimes seen which often predominates in the basolateral compartment of the cells. In addition, a diffuse IgA staining is sometimes seen in mucus, blood vessels or in the stroma of areas of inflammation. This staining pattern represents soluble IgA derived from serum or body fluids. Among tumors, IgA immunostaining can be seen in few lymphomas and in a small fraction of plasmacytomas.

## **Potential Research Applications**

Currently none.

## Protocol Suggestions

**Dilution: 1:150 ; pH 7,8 is optimal**. Freshly cut sections should be used (more than 10 days between cutting and staining deteriorates staining intensity for most antibodies in IHC).

#### Limitations

This antibody is available for **research use only** and is not approved for use in diagnostics.

## Warranty

There are no warranties, expressed or implied, which extend beyond this description. MSVA is not liable for any personal injury or economic loss resulting from this product.



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Appendix, mucosa - IgA positive plasma cells are numerous in the stroma. IgA also accumulates in the cytoplasm of the crypt epithelium.



Bronchus, mucosa



Colon descendens, mucosa



Epididymis - IgA positive plasma cells are lacking in the epididymis but some IgA staining occurs in blood serum.



Ileum, mucosa - Numerous IgA positive plasma cells in the stroma.



Kidney, cortex



Lymph node - A fraction of plasma cells are IgA positive.



Parotid gland



Pituitary gland, anterior lobe - Some IgA staining can occurs in the adenohypophysis.



Spleen - Few IgA positive plasma cells are seen.



Placenta (amnion and chorion) -Stromal IgA staining is occasionally seen – probably caused by IgA from the blood.



Stomach, corpus - IgA positive plasma cells are abundant in the stroma. IgA also accumulates in the cytoplasm of superficial epitheial cell layers.



Prostate



Seminal vesicle



Urinary bladder, urothelium - IgA positive plasma cells are abundant in this sample. A faint IgA staining also occurs in the superficial urothelial cell layer.



Thyroid gland - Some IgA staining can occurs in the colloid of some follicles.