

IgA (A-9): sc-373823

BACKGROUND

Immunoglobulins are four-chain, Y-shaped, monomeric structures comprised of two identical heavy chains and two identical light chains held together through interchain disulfide bonds. The chains form two domains, the Fab (antigen binding) fragment and the Fc (constant) fragment. Immunoglobulin A (IgA) is the main protein of the mucosal immune system. It is generated by B cells in gut-associated lymphoid tissues. Daily production of IgA exceeds that of any of the other immunoglobulins. The IgA heavy chain is an α -chain, and the light chains are either κ - or λ - chains. IgA exists mainly in dimers but can also exist as polymers or as monomers. Dimers and polymers contain a joining (J) chain that can be bound by the polymeric immunoglobulin receptor (pIgR) for transportation of the molecule to mucosal surfaces.

CHROMOSOMAL LOCATION

Genetic locus: IGHA1/IGHA2 (human) mapping to 14q32.33; IgA (mouse) mapping to 12 F1.

SOURCE

IgA (A-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 265-301 near the C-terminus of IgA of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IgA (A-9) is available conjugated to agarose (sc-373823 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-373823 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373823 PE), fluorescein (sc-373823 FITC), Alexa Fluor® 488 (sc-373823 AF488), Alexa Fluor® 546 (sc-373823 AF546), Alexa Fluor® 594 (sc-373823 AF594) or Alexa Fluor® 647 (sc-373823 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-373823 AF680) or Alexa Fluor® 790 (sc-373823 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-373823 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

IgA (A-9) is recommended for detection of IgA₁ and IgA₂ of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight (predicted) of IgA: 38 kDa.

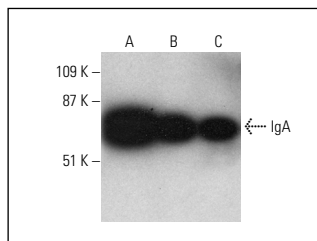
Molecular Weight (observed) of IgA: 52-69 kDa.

Positive Controls: IgA₁ (h2): 293T Lysate: sc-114781, Hep G2 cell lysate: sc-2227 or K-562 whole cell lysate: sc-2203.

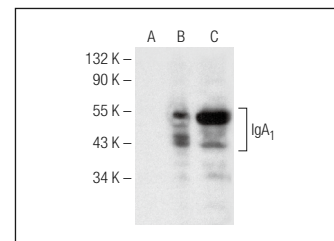
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



IgA (A-9) HRP: sc-373823 HRP. Direct western blot analysis of IgA expression in K-562 (A), Hep G2 (B) and WR19L (C) whole cell lysates.



IgA (A-9): sc-373823. Western blot analysis of IgA₁ expression in non-transfected 293T: sc-117752 (A), human IgA₁ transfected 293T: sc-114781 (B) and human PBL (C) whole cell lysates.

SELECT PRODUCT CITATIONS

- Wu, M., et al. 2016. Glutamine promotes intestinal SIgA secretion through intestinal microbiota and IL-13. *Mol. Nutr. Food Res.* 60: 1637-1648.
- Bai, L., et al. 2019. Immunosuppressive effect of artemisinin and hydroxychloroquine combination therapy on IgA nephropathy via regulating the differentiation of CD4⁺ T cell subsets in rats. *Int. Immunopharmacol.* 70: 313-323.
- Bai, L., et al. 2019. Renoprotective effects of artemisinin and hydroxychloroquine combination therapy on IgA nephropathy via suppressing NF κ B signaling and NLRP3 inflammasome activation by exosomes in rats. *Biochem. Pharmacol.* 169: 113619.
- Gong, Y., et al. 2021. G protein-coupled receptor 109A maintains the intestinal integrity and protects against ETEC mucosal infection by promoting IgA secretion. *Front. Immunol.* 11: 583652.
- Guo, M., et al. 2023. *Akkermansia muciniphila* and *Lactobacillus plantarum* ameliorate systemic lupus erythematosus by possibly regulating immune response and remodeling gut microbiota. *mSphere* 8: e0007023.
- Wang, Y., et al. 2023. Interferon- λ 3 alleviates intestinal epithelium injury induced by porcine rotavirus in mice. *Int. J. Biol. Macromol.* 240: 124431.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.