

IgA/G/M light chain (7A9): sc-51993

BACKGROUND

The immunoglobulin (Ig) molecule consists of two paired chains: a light chain and a heavy chain. Within each light and heavy chain are both a constant and a variable amino acid sequence. The variable portion of both heavy and light chains is responsible for antibody specificity. There are five different heavy chain types, IgA, G, M, D, and E, which differ in the constant-region amino acid sequence and the carbohydrate content. Each individual plasma cell secretes only one heavy chain type associated with one light chain type. On rare occasions, the formation of a junctional blister in bullous amyloidosis, in which the amyloid deposits are composed of λ light-chain immunoglobulins, is observed.

REFERENCES

1. Sivas, A., et al. 1990. Effect of IgA light chain on concentrations of fructosamine in serum. *Clin. Chem.* 36: 1386-1387.
2. Kaetzel, C.S., et al. 1991. The polymeric immunoglobulin receptor (secretory component) mediates transport of immune complexes across epithelial cells: a local defense function for IgA. *Proc. Natl. Acad. Sci. USA* 88: 8796-8800.
3. Winzer, M., et al. 1992. Bullous poikilodermatitic amyloidosis of the skin with junctional bulla development in IgG light chain plasmacytoma of the λ type. *Histology, immunohistology and electron microscopy. Hautarzt* 43: 199-204.
4. Claydon, M.A., et al. 1995. A partial sequence of an IgG light chain using continuous flow HPLC-FAB mass spectroscopy. *Biochem. Soc. Trans.* 23: 633.
5. Wiersma, E.J., et al. 1998. Structural and functional analysis of J chain-deficient IgM. *J. Immunol.* 160: 5979-5989.
6. Krol, M., et al. 2005. Analysis of correlated domain motions in IgG light chain reveals possible mechanisms of immunological signal transduction. *Proteins* 59: 545-554.
7. Snoeck, V., et al. 2006. The IgA system: a comparison of structure and function in different species. *Vet. Res.* 37: 455-467.

SOURCE

IgA/G/M light chain (7A9) is a mouse monoclonal antibody raised against a mixture of immunoglobulin light chains of human origin.

PRODUCT

Each vial contains 100 μ g IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

PROTOCOLS

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

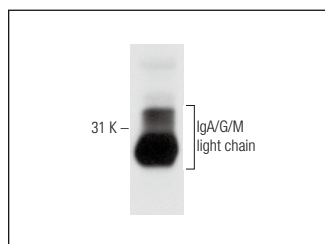
APPLICATIONS

IgA/G/M light chain (7A9) is recommended for detection of IgA, IgG, IgM of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of IgA/G/M light chain: 14 kDa.

Positive Controls: human PBL whole cell lysate.

DATA



IgA/G/M light chain (7A9): sc-51993. Western blot analysis of IgA/G/M light chain expression in human PBL whole cell lysate.

SELECT PRODUCT CITATIONS

1. Lim, D.M., et al. 2017. Difference in protective effects of GIP and GLP-1 on endothelial cells according to cyclic adenosine monophosphate response. *Exp. Ther. Med.* 13: 2558-2564.
2. Dixit, U., et al. 2021. INI1/SMARCB1 Rpt1 domain mimics TAR RNA in binding to integrase to facilitate HIV-1 replication. *Nat. Commun.* 12: 2743.
3. Cho, Y.E., et al. 2022. Role of the WNT/ β -catenin/ZKSCAN3 pathway in regulating chromosomal instability in colon cancer cell lines and tissues. *Int. J. Mol. Sci.* 23: 9302.
4. Liu, H., et al. 2025. Titin gene mutations enhance radiotherapy efficacy via modulation of tumour immune microenvironment in rectum adenocarcinoma. *Clin. Transl. Med.* 15: e70123.

RESEARCH USE

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