Anti-Human IgM (SAG3)

	REF	Σ	
PerCP/cyAnine5.5	IGMPP5.5-25T	25 test	RUO

1. PRODUCT DESCRIPTION

Clone: MHM-88
Isotype: Mouse IgG1, κ
Tested application: flow cytometry (Quality tested) assays.
Immunogen: Human Ig cocktail
Species reactivity: Human
Storage instruction: store in the dark at 2-8 oC
Storage buffer: aqueous buffered solution containing protein stabilizer and 0.09% sodium azide (NaN3).
Recommended usage: Immunostep's anti-human IgGM, clone MHM-88, is a monoclonal antibody intended for the identification of cells expressing IgM protein in peripheral blood using a compatible flow cytometer. This reagent is effective for direct immunofluorescence staining of human tissue for flow cytometric analysis using 1 test for 106 cells or 100 l of sample. Anti-IgM should be used with wash steps before reagent addition or with ficoll gradient separation to remove Immunoglobulins from serum.
Presentation: liquid
Source: Supernatant proceeding from an in vitro cell culture of a cell hybridoma.
Purification: Affinity chromatography.
Other Names: IGHM, Immunoglobulin M
Gene ID: 3507

2. ANTIGEN DETAILS

Large description: Immunoglobulin (Ig) G (IgG) is the predominant of five classes of Ig (IgG, IgA, IgM, IgE, and IgD). Igs differ in heavy chain structure and effector function.

In normal adults, IgG3 represents ~4% of serum IgG. IgG3 activates complement more readily than other IgG subclasses, has high affinity for Fc receptors on phagocytes (FcγR), crosses the placenta less readily than IgG1 and IgG4 but more so than IgG2, and has an overall half-life of ~7 days. Some adults with frequent or severe respiratory tract infection have subnormal IgG3 (<2 SD below respective means) (1-2)

Immunoglobulin M (IgM) represents the primary antibody produced during an initial immune response. Structurally, IgM is a pentameric molecule composed of five immunoglobulin units linked by a joining (J) chain, providing it with high avidity for antigens. Owing to its multivalent structure, IgM is highly efficient in activating the classical complement pathway and in promoting agglutination and neutralization of pathogens. In healthy individuals, IgM accounts for approximately 5–10% of total serum immunoglobulins and is predominantly expressed on the surface of naïve B lymphocytes as a membrane-bound form (mIgM), where it functions as part of the B-cell receptor (BCR) complex.

Upon antigen encounter, IgM plays a key role in the initiation of humoral immune responses and the activation of downstream signaling pathways leading to B-cell differentiation and antibody production. The anti-human IgM monoclonal antibody specifically recognizes the μ heavy chain of human IgM and does not cross-react with other immunoglobulin isotypes (IgG, IgA, IgE, or IgD). When used in flow cytometry or immunofluorescence assays, it enables the identification and quantification of IgM-expressing B cells, facilitating studies of B-cell maturation, immune competence, and abnormal immunoglobulin expression associated with immunodeficiencies, autoimmune diseases, and B-cell malignancies.

3. WARRANTY

Warranted only to conform to the quantity and contents stated on the label or in the product labelling at the time of delivery to the customer. Immunostep disclaims hereby other warranties.

Immunostep's sole liability is limited to either the replacement of the products or refund of the purchase price.

4. ADDITIONAL INFORMATION

For research use only. Not for diagnostic use.

Not for resale. Immunostep will not be responsible of violations that may occur with the use of this product. Any use of this product other than the specified in this document is strictly prohibited.

Unless otherwise indicated by Immunostep by written authorization, this product is intended for research only and is not to be used for any other purpose, including without limitation, for human or animal diagnostic, therapeutic or commercial purposes.

Please, refer to www.immunostep.com technical support for more information.

5. REFERENCES

1. Vilpo J, Tobin G, Hulkkonen J, Hurme M, Thunberg U, Sundström C, Vilpo L, Rosenquist R. Surface antigen expression and correlation with variable heavy-chain gene mutation status in chronic lymphocytic leukemia. Eur J Haematol. 2003 Jan;70(1):53-9. doi: 10.1034/j.1600-0609.2003.02838.x. PMID: 12631259.

2. Barton JC, Barton JC, Bertoli LF, Acton RT. Factors associated with IgG levels in adults with IgG subclass deficiency. BMC Immunol. 2021 Aug 9;22(1):53. doi: 10.1186/s12865-021-00447-3. PMID: 34372773; PMCID: PMC8353875.

6. EXPLANATION OF SYMBOLS

	Form
REF	Catalog reference
Σ	Contains sufficient for > test
	Regulatory Status
	Quantity per test
RUO	Research Use Only
[A]	Concentration
	Manufacturer

7. MANUFACTURED BY:

IMMUNOSTEP S.L.
Address: Avda. Universidad de Coimbra, s/n
Cancer Research Center (C.I.C)
Campus de Unamuno
37007 Salamanca (Spain)
Telf./fax: (+34) 923 294 827
E-mail: info@immunostep.com
www.immunostep.com