SZABO SCANDIC

Part of Europa Biosite

Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

Order online now!

www.rockland.com
tech@rockland.com
+1 484.791.3823

Datasheet for 010-0107

Mouse IgM

Overview

Description:	Mouse IgM Whole Molecule - 010-0107
Item No.:	010-0107
Size:	1 mg
Applications:	SDS-PAGE, ELISA, IF, IP
Origin:	Mouse

Product Details

Background:	Mouse IgM, or mouse Immunoglobulin M, purified protein is a basic antibody that is produced by B cells. Mouse IgM is by far the physically largest antibody in the human circulatory system. Mouse IgM is the first antibody to appear in response to initial exposure to antigen. IgM is predominantly produced in the spleen. Mouse IgM is formed from covalently linking 5 immunoglobulins together, the approximate molecular weight of IgM is 900kDa and possesses 10 binding sites.
Synonyms:	Mouse Immunoglobulin M
Species of Origin:	Mouse
Format:	IgM
Type:	Native Protein

Target Details

Purity/Specificity:	Mouse IgM was prepared from normal serum by a multi-step process which includes delipidation, selective precipitation and tandem molecular sieve chromatography followed by extensive dialysis against the buffer stated above. Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-Mouse Serum and anti-Mouse IgM (µ chain specific). No reaction was observed against anti-Mouse IgG F(c). Some light chain cross-reactivity will occur with anti-Mouse IgG.

Application Details

Tested Applications:	SDS-PAGE
Suggested Applications:	ELISA, IF, IP (Based on references)
Application Note:	Mouse IgM whole molecule has been tested by SDS-Page and can be utilized as a control or standard reagent in SDS, Western Blotting, and ELISA experiments.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	user optimized
WB:	user optimized

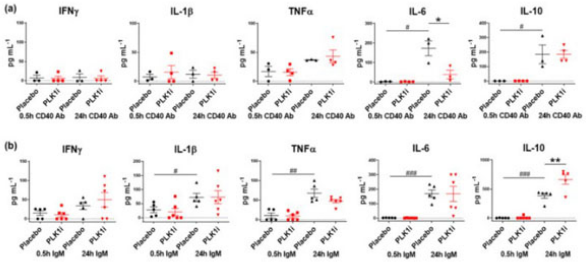
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.1 mg/ml by UV absorbance at 280 nm
Buffer:	0.1 M Tris Chloride, 0.5 M Sodium Chloride, pH 8.0
Preservative:	0.1% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

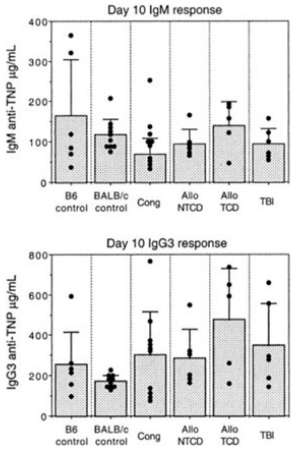
Shipping Condition:	Wet Ice
Storage Condition:	Store vial at 4° C prior to opening. This product is stable 4° C as an undiluted liquid. Dilute only prior to immediate use. For extended storage mix with an equal volume of glycerol, aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



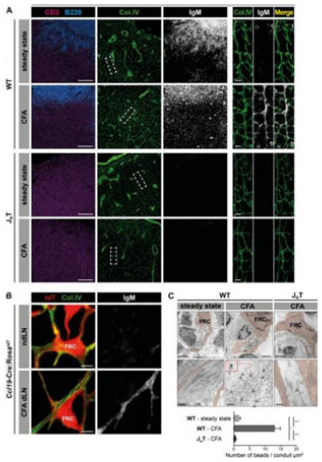
ELISA

PLK1 regulates inflammatory cytokines induced by anti-CD40 and anti-IgM stimulation in vitro. Splenocytes were isolated from MLR.lpr mice, stimulated with (a) anti-CD40 antibody or (b) anti-IgM for 0.5 h and 24 h, with or without PLK1 blockade. Secretion of inflammatory cytokine in the culture supernatant were measured by ELISA, including IFNγ, IL-1β, TNFα, IL-6 and IL-10. The assays were performed in triplicate. Female MRL.lpr, 10-week-old, n = 3–6 per group. * indicates change between groups. # indicates change within one group. *P < 0.05; **P < 0.01; # P < 0.05; ## P < 0.01; ### P < 0.001. Immunoglobulin (Ig) standards, including mouse IgM (p/n 010-0107), IgG or serum samples. Fig 6. PMID: 35024139.

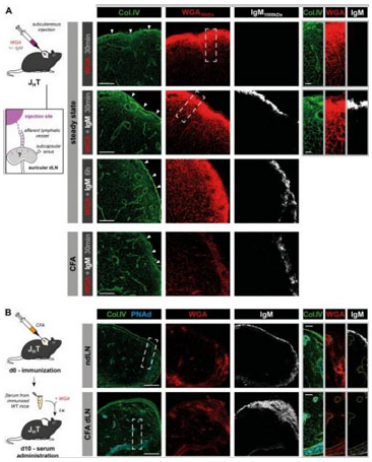


ELISA

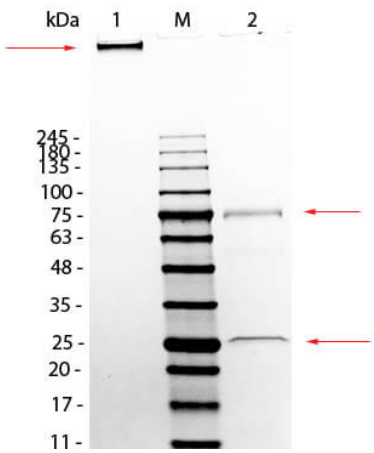
Comparison of TI Ab responses in IUT, TBI, and control mice. Mice were immunized intraperitoneally with 25 µg of TNP-Ficoll. Sera were obtained 10 days after immunization and tested for IgM and IgG3 anti-TNP levels by sandwich ELISA. Each dot represents an individual mouse. Bar graphs represent average Ab levels ± SD. IUT mice were immunized starting at 12 weeks of age. TBI mice were challenged starting at 12 weeks after transplantation. Baseline total IgM and IgG serum levels were assessed as follows: 96-well ELISA plates were coated with goat anti-IgG (p/n 610-101-121) or goat anti-IgM Ab. Ig concentrations were calculated from standard curves generated with mouse IgM (p/n 010-0107) and IgG standards. Fig. 2. PMID: 12393436.



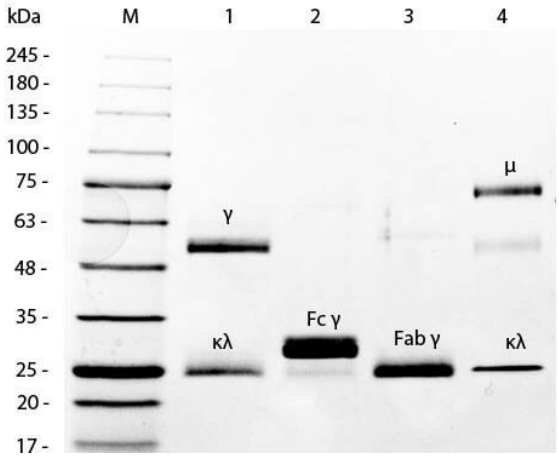
Immunofluorescence Microscopy
IgM localizes within the conduit system of reactive LNs. (A) Confocal imaging of reactive and steady state auricular LNs from WT (C57BL/6J) or B cell–deficient (JHT) mice, 10 d after intradermal CFA immunization in the ears. Sections were stained for CD3, B220, collagen IV (col.IV), and IgM. Insets display high-magnification views of collagen IV + conduits in the T cell zone. Bars, 100 µm (left panels); 10 µm (right panels). Data are representative of three experiments (two mice per condition and experiment). (B) Confocal imaging of auricular dLNs and contralateral ndLNs from Ccl19-Cre:RosatdT mice, 10 d after intradermal CFA injection in one ear. Sections were stained for collagen IV and IgM. tdT, tdTomato. Bars, 5 µm. Pictures are representative of three experiments (two mice per experiment). (C) Representative EM pictures of FRCs and conduits in steady state and auricular reactive LNs of WT and JHT mice, 10 d after intradermal CFA injection in one ear. Ultrathin sections were stained with 6-nm gold nanobeads specific for mouse IgM (highlighted with arrowheads), and the average number of beads located in the conduit lumen was evaluated for each condition. Bars, 2 µm (upper panels); 200 nm (lower panels). Data are representative of two experiments (one individual per condition and experiment). Results are expressed as mean ± SEM. *, $P < 0.05$; ****, $P < 0.0001$. Figure 1. PMID: 30429248.



Immunofluorescence Microscopy
Lymph- and blood-borne soluble IgM does not access the conduit system. (A) Unimmunized JHT mice or animals that received an intradermal injection of CFA 10 d before in one ear were injected s.c. with fluorescent WGA (≈38 kD) with or without purified mouse IgM (≈1,000 kD) and their auricular dLNs were harvested at the indicated time points. LN sections were stained for collagen IV (Col.IV) and IgM. Arrowheads indicate SCS. Insets show high-magnification views of the SCS and the underlying cortex. Bars, 100 µm (left panels); 20 µm (right panels). Data are representative of three experiments (two mice per condition and experiment). (B) JHT and WT mice were injected intradermally with CFA in one ear. 10 d later, JHT mice were supplemented with the serum of the immunized WT mice over a 24-h period and injected i.v. with fluorescent WGA 5 min before the harvest of reactive and contralateral auricular LNs. Data show confocal images from LN sections stained for collagen IV, PNAd, and IgM. Insets display high-magnification views of PNAd+ HEVs (yellow dashed line) and surrounding conduits. Bars, 200 µm (left panels); 50 µm (right panels). Data are representative of two experiments (three mice per experiment). Figure 2. PMID: 30429248.



SDS-PAGE
SDS-PAGE of Mouse IgM Whole Molecule. Lane 1: Mouse IgM, Non-Reduced. Lane 2: Mouse IgM, Reduced. Load: 1.0 µg per lane. Predicted/Observed size - Non-Reduced: 900 kDa (Pentamer), 900 kDa (Molecule larger than can pass through gel), Reduced: 78 and 25 kDa, 75 and 25 kDa.



SDS-PAGE
SDS-PAGE of Mouse IgG Whole Molecule Rhodamine Conjugated (p/n 010-0002). MW: 5 µL Opal Prestained Marker (p/n MB-210-0500). Lane 1: Reduced Mouse IgG Whole Molecule Rhodamine Conjugated (p/n 010-0002). Lane 2: Reduced Mouse F(c) Fragment (p/n 010-0103). Lane 3: Reduced Mouse F(ab) Fragment (p/n 010-0105). Lane 4: Mouse IgM Kappa Myeloma Protein (p/n 010-001-033). Load: 1 µg per lane. Predicted/Observed size: IgG at 50 and 25 kDa; F(c) at 25 kDa; F(ab) at 25 kDa; IgM K at 70 and 23 kDa. Observed F(c) Fragment migrates slightly higher.

References

- Li Y et al. Autoimmune and neuropsychiatric phenotypes in a Mecp2 transgenic mouse model on C57BL/6 background. *Front Immunol.* (2024)
- Alugupalli AS et al. The Lack of Natural IgM Increases Susceptibility and Impairs Anti-Vi Polysaccharide IgG Responses in a Mouse Model of Typhoid. *Immunohorizons* (2023)
- Li, Y et al. Identification of polo-like kinase 1 as a therapeutic target in murine lupus. *Clinical & Translational Immunology* (2022)
- Thierry, GR et al. The conduit system exports locally secreted IgM from lymph nodes. *The Journal of Experimental Medicine* (2018)
- Ardi VC et al. Macrocycles that inhibit the binding between heat shock protein 90 and TPR-containing proteins. *ACS Chem Biol.* (2011)
- Waldschmidt TJ et al. Abnormal T cell-dependent B-cell responses in SCID mice receiving allogeneic bone marrow in utero. Severe combined immune deficiency. *Blood.* (2002)

Disclaimer