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Datasheet for 012-0102

Rat IgG

Overview

Description:	Rat IgG Whole Molecule (BULK ORDER) - 012-0102
Item No.:	012-0102
Size:	10 mg
Applications:	SDS-PAGE, WB, ELISA, FC, Other
Origin:	Rat

Product Details

Background:	Rat Immunoglobulin purified protein are antibody molecules. Rat IgG is composed of four peptide chains — two heavy chains (gamma) and two light chains. Rat IgG has two antigen binding sites. Other Immunoglobulins may be described in terms of polymers with the IgG structure considered the monomer. Rat IgG typically constitutes 75% of serum immunoglobulins. Rat IgG molecules are synthesized and secreted by plasma B cells.
Synonyms:	Rat Immunoglobulin G, Rat IgG whole molecule, Rat IgG purified protein
Species of Origin:	Rat
Format:	IgG
Type:	Native Protein

Target Details

Purity/Specificity:	Rat IgG was prepared from normal serum by a multi-step process which includes delipidation, salt fractionation and ion exchange chromatography followed by extensive dialysis against the buffer stated above. Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-Rat IgG and anti-Rat Serum.
Relevant Links:	• 012-0102 SDS

Application Details

Tested Applications:	SDS-PAGE, WB

Suggested Applications:	ELISA, FC, Other (Based on references)
Application Note:	Rat IgG whole molecule has been tested by SDS-Page and western blot and is suitable for use as antigen or ligand in immunochemical reactions, as a control or standard in assays, for conjugation and most other immunological methods requiring highly purified immunoglobulins.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	User Optimized
FC:	User Optimized
WB:	User Optimized

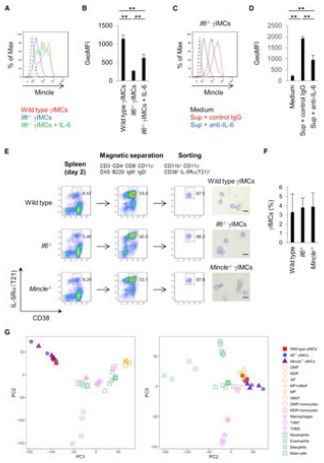
Formulation

Physical State:	Lyophilized
Concentration:	10.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None
Reconstitution Volume:	1.0 mL
Reconstitution Buffer:	Restore with deionized water (or equivalent)

Shipping & Handling

Shipping Condition:	Ambient
Storage Condition:	Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Flow Cytometry

γIMC-Derived IL-6 Upregulates Mincle Expression. (A–G) C57BL/6 mice, Il6−/− mice, and Mincle−/− mice intraperitoneally infected for 48 h with NIH34 (1.0 × 107 colony-forming units/mouse) were sacrificed. Splenocytes were immediately negatively selected by magnetic separation, and CD11b+ CD11c− CD38+ IL-5Rα (T21)+ γIMC subsets were isolated by fluorescence-activated cell sorting.

(A and C) Il6−/− γIMCs were treated for 12 h with or without 100 ng/mL IL-6 (A) or with 1 μg/mL IL-6 neutralizing mAb (clone MP5-20F3) or control rat IgG in combination with 90% culture supernatant from wild type γIMCs stimulated with NIH34 for 24 h at a multiplicity of infection of 30 (C). Cells were analyzed for Mincle expression by flow cytometry using anti-Mincle mAb and an isotype control, represented by the solid and dashed lines, respectively.

(B and D) Data are mean ± SD (B, n = 5 mice for each experimental cell group; D, n = 4 mice for each experimental cell group) of the geometric mean fluorescent intensity due to surface expression of Mincle. ⁇⁇p < 0.01 by Student's t test. Data are representative of two independent experiments.

(E) The numbers (%) in the plots represent the population of CD38+ IL-5Rα (T21)+ γIMC subsets. Cytospin preparations of each sorted cell subset were visualized with May-Grünwald-Giemsa staining. Scale bars, 20 μm.

(F) Data are expressed as mean ± SD (n = 5 independent experiments) of CD38+ IL-5Rα (T21)+ γIMC subsets as % of total splenocytes.

(G) RNA sequencing of wild type, Il6−/−, and Mincle−/− γIMCs (n = 3 independent experiments). Visualization of 18 cell types in two dimensions by principal component analysis of 20,596 protein-coding genes expressed in at least one sample. Left: first versus second principal component (PC1 versus PC2). Right: second versus third principal component (PC2 versus PC3). Control rat IgG (p/n 012-0102). Fig 4. PMID: 30970258.

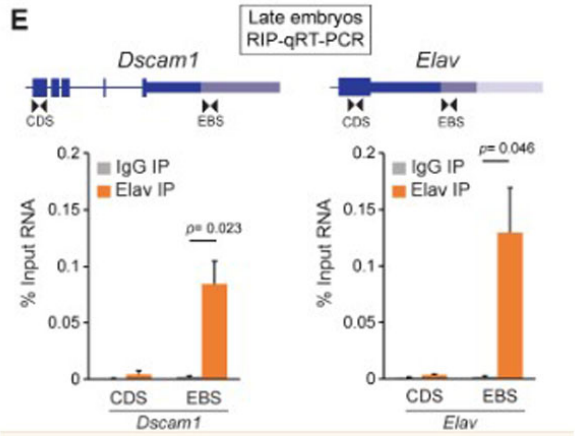
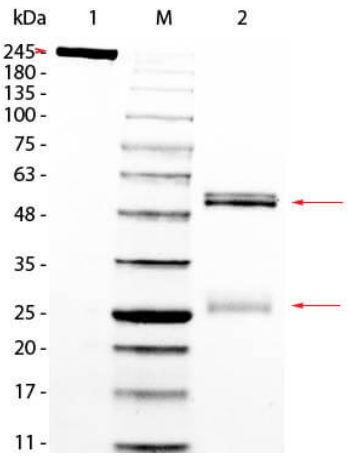
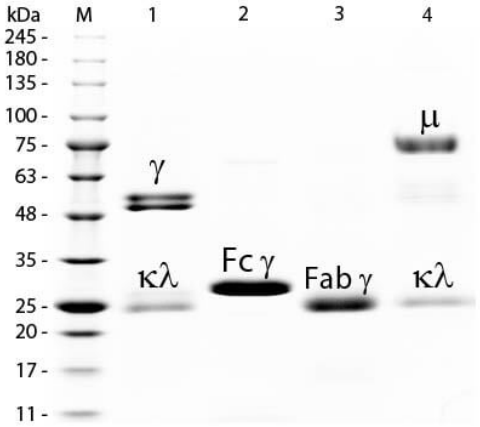


Figure
Elav Regulates Dscam1 Long 3' UTR Biogenesis. (E) RIP-qRT-PCR experiments demonstrate binding of Elav downstream of the Dscam1 proximal polyA site (left), and as a positive control, binding of Elav downstream of the Elav proximal polyA site (right). RIP was performed using rat and mouse anti-Elav antibodies from 12–16 h embryos. Primers were designed to detect a region in the CDS or a region immediately downstream of the proximal polyA site (EBS). Error bars represent SEM of four separate immunoprecipitation reactions on independently prepared nuclei. n = 4. p value reflects two-tailed paired Student's t test. Samples were incubated with a mixture of 1 µg rat and 1 µg mouse anti-Elav antibodies or a mixture of 1 µg rat and 1 µg mouse IgG (p/n 012–0102 and p/n 010–0102). Fig 1. PMID: 31242415.



SDS-PAGE
SDS PAGE of Rat IgG Whole Molecule. Lane 1: Non-Reduced Rat IgG Whole Molecule. Lane 2: 5 µL Opal Prestained Marker (p/n MB-210-0500). Lane 3: Reduced Rat IgG Whole Molecule. Load: 1 µg per lane. Predicted/Observed size: Non-Reduced at 160kDa/Observed at 245 kDa; Reduced at 55, 25 kDa. Non-reduced IgG migrates slightly higher.



SDS-PAGE
SDS-PAGE of Rat IgG F(c) Fragment Rhodamine Conjugated (p/n 012-0003). Lane M: 3 µL Opal Prestained Marker (p/n MB-210-0500). Lane 1: Reduced Rat IgG Whole Molecule (p/n 012-0102). Lane 2: Reduced Rat IgG F(c) Fragment Rhodamine Conjugated (p/n 012-0003). Lane 3: Reduced Rat IgG Fab Fragment (p/n 012-0105). Lane 4: Reduced Rat IgM Whole Molecule (p/n 012-0107). Load: 1 µg of IgG, F(c), Fab; 1.5 µg of IgM. Predicted/Observed size: IgG at 55 and 25 kDa; F(c) at 25 kDa; Fab at 25 kDa; IgM at 78 and 25 kDa. Observed F(c) Fragment migrates slightly higher.

References

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