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Datasheet for 017-0107

Monkey IgM

Overview

Description:	Monkey IgM Whole Molecule - 017-0107
Item No.:	017-0107
Size:	250 µg
Applications:	SDS-PAGE, ELISA
Origin:	Monkey

Product Details

Background:	Immunoglobulin M is the largest antibody isotype and the first to be secreted against an initial exposure to antigen. IgM is predominantly produced in the spleen. Formed from covalently linking 5 immunoglobulins together, the approximate molecular weight of IgM is 900kDa and possesses 10 binding sites (though due to the size of most antigens, not all sites are capable of binding at once). Due to this large size, IgM is typically isolated to the serum.
Synonyms:	Monkey Immunoglobulin M
Species of Origin:	Monkey
Format:	IgM
Type:	Native Protein

Target Details

Purity/Specificity:	Monkey IgM whole molecule 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. Monkey IgM whole molecule was assayed by immunoelectrophoresis resulted in a single precipitin arc against anti-Monkey Serum and anti-Monkey IgM (µ chain specific). No reaction was observed against anti-Monkey IgG F (c). Some light chain cross reactivity will occur with anti-Monkey IgG.
Relevant Links:	• 017-0107 SDS

Application Details

Tested Applications:	SDS-PAGE
Suggested Applications:	ELISA (Based on references)
Application Note:	Monkey 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
IHC:	User Optimized
WB:	User Optimized

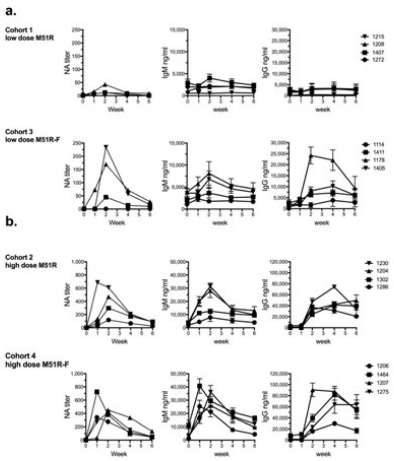
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.0 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

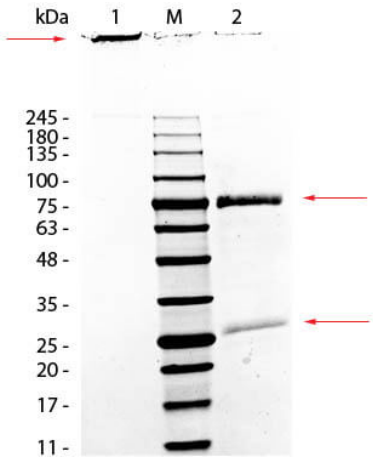
Shipping Condition:	Wet Ice
Storage Condition:	Store vial at 4° C prior to opening. This product is stable 4° C as an undiluted liquid. Dilute only prior to immediate use. For extended storage mix with an equal volume of glycerol, aliquot contents and freeze at -20° C or below. Avoid cycles of freezing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

Images



ELISA

Humoral immune response. Plasmas were analyzed before vaccination (week 0, pre-immune) and at weeks 1, 2, 4 and 6 post-vaccination for anti-VSV antibodies. Neutralizing antibody (NA) titer (left panel) was defined as the dilution of serum that inhibited infection of mouse EL4 cells with M51R-eGFP by 50%. IgM [p/n 017-0107] (middle panel) and IgG [p/n 017-0102] (right panel) levels are expressed in ng/mL (mean ± SD, triplicate values), measured by ELISA with extrapolation from standard curves. Data for low dose (a) and high dose (b) vaccinations with M51R and M51R-F are shown. Note scale differences for low and high dose data. Statistical significance was determined by two-factor analysis of variance with cohort and time as the two factors. For all three antibody types, statistical significance of $p < 0.05$ (after correction for multiple comparisons) was obtained for comparisons of cohort 1 versus cohort 3 (low dose M51R vs. M51R-F), cohort 1 versus cohort 2 (low dose M51R vs. high dose M51R), and cohort 3 versus cohort 4 (low dose M51R-F vs. high dose M51R-F), but not for cohort 2 versus cohort 4 (high dose M51R vs. high dose M51R-F). The data shown represent 1 of 2 analyses with similar results performed on plasma from each animal. Figure 1. PMID: 29562688.



SDS-PAGE

SDS-PAGE of Monkey IgM Whole Molecule. Lane 1: Monkey IgM, Non-Reduced. Lane 2: Monkey 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.

References

- Wu HL et al. IgM-and IgG-cleaving enzyme facilitates AAV gene transfer in AAV-seropositive macaques. *Front Immunol.* (2026)
- Smith TJ. et al. Engineered IgM and IgG cleaving enzymes for mitigating antibody neutralization and complement activation in AAV gene transfer. *Mol Ther.* (2024)
- Smith JC et al. Induction of Tier 2 HIV-Neutralizing IgA Antibodies in Rhesus Macaques Vaccinated with BG505.664 SOSIP. *Vaccines (Basel).* (2024)
- Westcott MM et al. Immunogenicity in African green monkeys of m protein mutant vesicular stomatitis virus vectors and contribution of vector-encoded flagellin. *Vaccines (Basel).* (2018)

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