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Datasheet for 003-0107

Chicken IgM

Overview

Description:	Chicken IgM Whole Molecule - 003-0107
Item No.:	003-0107
Size:	1 mg
Applications:	SDS-PAGE, ELISA
Origin:	Chicken

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:	Chicken Immunoglobulin M, Fowl IgM
Species of Origin:	Chicken
Format:	IgM
Type:	Native Protein

Target Details

Purity/Specificity:	Chicken 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. Chicken IgM whole molecule assayed by immunoelectrophoresis resulted in a single precipitin arc against anti-Chicken Serum and anti-Chicken IgM (µ chain specific). No reaction was observed against anti-Chicken IgG F (c). Some light chain cross reactivity will occur with anti-Chicken IgG. Analysis by SDS-PAGE was used to show purity at greater than 95%. Some high molecular weight banding may be visible. A minor band at ~50 kDa may also be visible.

Application Details

Tested Applications:	SDS-PAGE
Suggested Applications:	ELISA (Based on references)
Application Note:	Chicken IgM whole molecule has been tested in SDS-Page and can be utilized as a control or standard reagent in 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
Other:	This lot is supplied in PBS/azide buffer

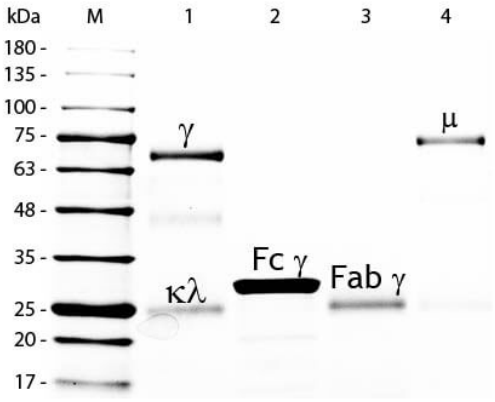
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.0mg/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

Shipping & Handling

Shipping Condition:	Wet Ice
Storage Condition:	Chicken IgM whole molecule is stable for several weeks at 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. Centrifuge product if not completely clear after standing at room temperature.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



SDS-PAGE
SDS-PAGE of Chicken IgG/IgY Whole Molecule Rhodamine Conjugated (p/n 003-0002). Lane M: 5 µL Opal Prestained Marker (p/n MB-210-0500). Lane 1: Reduced Chicken IgG Whole Molecule Rhodamine Conjugated (p/n 003-0002). Lane 2: Reduced Chicken IgG F(c) Fragment (p/n 003-0103). Lane 3: Reduced Chicken IgG Fab Fragment (p/n 003-0105). Lane 4: Reduced Chicken IgM Whole Molecule (p/n 003-0107). Load: 1 µg per lane. Predicted/Observed size: IgG at 72 and 25 kDa; F(c) at 25 kDa; Fab at 25 kDa; IgM at 75 kDa. Observed F(c) Fragment migrates slightly higher. Other bands: Chicken IgG heavy chain alternative splicing variant at approximately 40 kDa in Lane 1.

References

- Alhussien MN et al. Deciphering interferon functions in avian influenza using receptor knockout models in the natural host. *Elife.* (2026)
- Quasney C et al. Degradation of CaMKII is stimulated by its active conformation. *J Biol Chem.* (2025)
- Ching KH et al. Chickens with humanized immunoglobulin genes generate antibodies with high affinity and broad epitope coverage to conserved targets. *Mabs.* (2018)

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