Datasheet for 004-0102-1000

Dog IgG whole molecule

Overview

Description:	Dog IgG whole molecule (BULK ORDER) - 004-0102-1000
Item No.:	004-0102-1000
Size:	1 g
Applications:	SDS-PAGE, Biochemical Assay, ELISA, Functional Assay, WB
Origin:	Dog

Product Details

Background:	Secreted as part of the adaptive immune response by plasma B cells, immunoglobulin G constitutes 75% of serum immunoglobulins. Immunoglobulin G binds to viruses, bacteria, as well as fungi and facilitates their destruction or neutralization via agglutination (and thereby immobilizing them), activation of the compliment cascade, and opsonization for phagocytosis. The whole IgG molecule possesses both the F(c) region, recognized by high-affinity Fc receptor proteins, as well as the F(ab) region possessing the epitope-recognition site. Both heavy and light chains of the antibody molecule are present.
Synonyms:	Dog IgG whole molecule, Dog immunoglobulin G, Canine IgG
Species of Origin:	Dog
Format:	IgG
Type:	Native Protein

Target Details

Purity/Specificity:	Dog IgG whole molecule 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. Dog IgG whole molecule was assayed by immunoelectrophoresis resulted in a single precipitin arc against anti-Dog IgG and anti-Dog Serum.

Application Details

Tested Applications:	SDS-PAGE
Suggested Applications:	Biochemical Assay, ELISA, Functional Assay, WB (Based on references)
Application Note:	Dog IgG 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

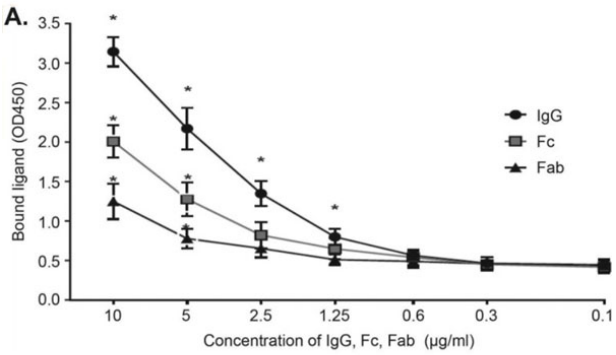
Formulation

Physical State:	Liquid (sterile filtered)
Buffer:	0.01 M Sodium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

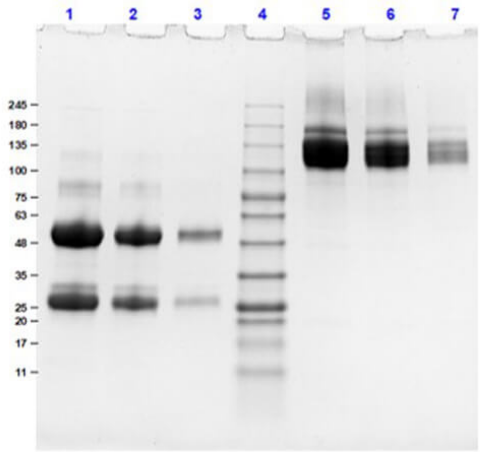
Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C. 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. Dog IgG whole molecule 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



ELISA
Full-length coagulase protein binding to prothrombin, canine IgG, and complement C3. Data were obtained from three independent experiments. (A) ELISA results showing coagulase binding of canine IgG, Fc, and Fab. There was a significant interaction of treatment (IgG, Fc, and Fab) with the binding of coagulase protein (P = 0.010). All three treatments had significant differences between results at different concentrations (P < 0.001). For IgG concentrations of 10, 5, 2.5, and 1.25 µg/ml, binding was significantly different from that of the negative control (*, P < 0.001). For Fc and Fab concentrations of 5 and 10 µg/ml, binding was significantly different from that of the negative control (*, P < 0.001). The coagulase protein bound more IgG and Fc than Fab. At 5 and 10 µg/ml, IgG binding was significantly higher than that of Fab (P = 0.008), and binding of IgG and Fc was marginally different (P = 0.054). Fig 4. PMID: 29891539.



SDS-PAGE
SDS-PAGE of Dog IgG Whole Molecule. Lane 1: Dog IgG Whole Molecule Reduced (10µg). Lane 2: Dog IgG Whole Molecule Reduced (5µg). Lane 3: Dog IgG Whole Molecule Reduced (1.0µg). Lane 4: Opal Prestained Molecular Weight Marker (p/n MB-210-0500). Lane 5: Dog IgG Whole Molecule Non-Reduced (10µg). Lane 6: Dog IgG Whole Molecule Non-Reduced (5µg). Lane 7: Dog IgG Whole Molecule Non-Reduced (1.0µg). 4-20% Gel, Coomassie Stained.

References

- Walsh S et al. Structural and functional characterization of IdeC, a novel IgG-specific protease of Streptococcus canis. *Infect Immun.* (2025)
- Olivry T et al. Validation of a Multiplex Molecular Macroarray for the Determination of Allergen-Specific IgE Sensitizations in Dogs. *Vet Sci.* (2024)
- Abouelkhair, MA et al. Characterization of recombinant wild-type and nontoxigenic protein A from Staphylococcus pseudintermedius. *Virulence* (2018)
- Sewid AH et al. Identification, Cloning, and Characterization of Staphylococcus pseudintermedius Coagulase. *Infect Immun.* (2018)

Disclaimer

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