

Datasheet for 007-0102-0005**Hamster IgG****Overview**

Description:	Hamster IgG Whole Molecule - 007-0102-0005
Item No.:	007-0102-0005
Size:	5 mg
Applications:	SDS-PAGE, ELISA, IF, IP, Other
Origin:	Golden Syrian Hamster

Product Details

Background:	Secreted as part of the adaptive immune response by plasma B cells, Hamster 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 complement 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:	Hamster Immunoglobulin Gamma, Immunoglobulin G
Species of Origin:	Golden Syrian Hamster
Format:	IgG
Type:	Native Protein

Target Details

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

Tested Applications:	SDS-PAGE
Suggested Applications:	ELISA, IF, IP, Other (Based on references)
Application Note:	Hamster IgG whole molecule has been tested by 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

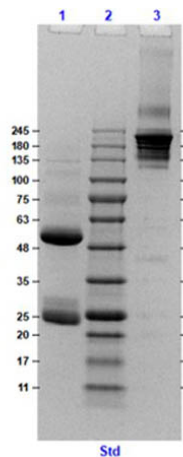
Formulation

Physical State:	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
Reconstitution Volume:	500 µL
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. Hamster 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



SDS-PAGE

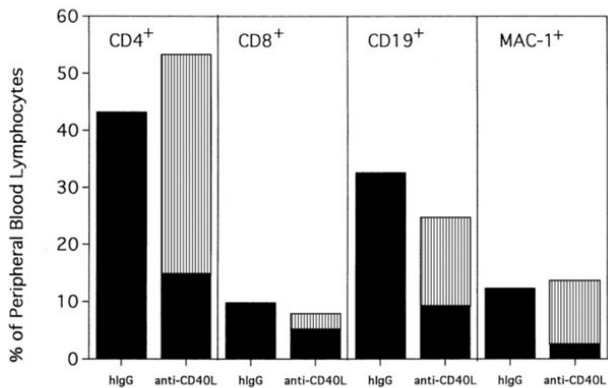
SDS-PAGE Results of Golden Syrian Hamster IgG Whole Molecule.

Lane 1: Golden Syrian Hamster IgG Whole Molecule, Reduced [5.0µg].

Lane 2: Opal Pre-Stained Molecular Weight Marker (p/n MB-210-0500).

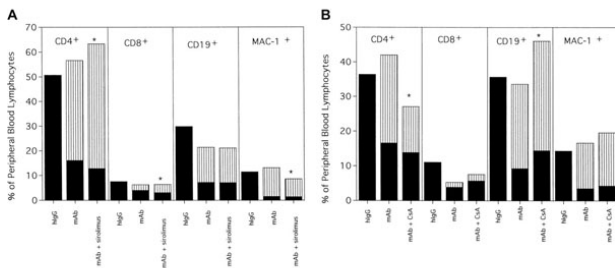
Lane 3: Golden Syrian Hamster IgG Whole Molecule, Non-Reduced [5.0µg].

4-20% gel, Coomassie stained.



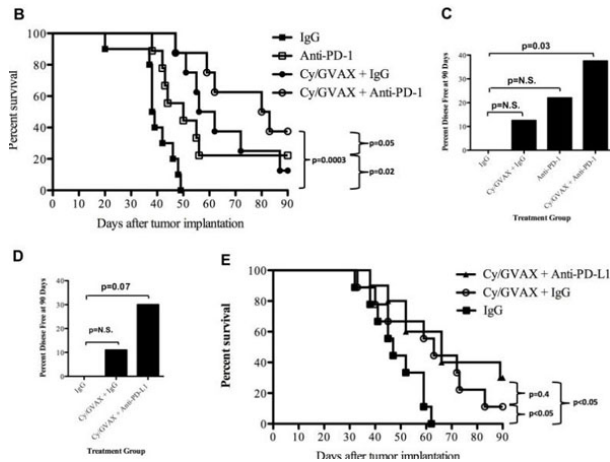
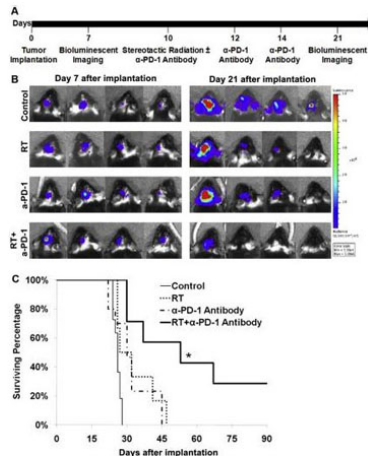
Immunoprecipitation

Anti-CD154–facilitated alloengraftment is multilineage. Twenty mice from 2 representative experiments shown in Figure 1 were phenotyped at 120 days after BMT for donor-host origin of CD4⁺ and CD8⁺ T cells, CD19⁺ B cells, and MAC-1⁺ myeloid cells. On the x-axis are shown the host and donor proportions of each of the lineages. ■ indicates the proportion of each lineage of host origin; ▨, the proportion of each lineage that is of donor origin. On the y-axis is shown the percentage of PBLs of each lineage. Irrelevant hlgG–treated mice had no detectable donor chimerism and thus are composed entirely of host-type cells. Note that most CD4⁺ T cells, CD19⁺ B cells, and MAC-1⁺ myeloid cells in anti-CD154–treated mice are of donor origin. In contrast, most of the CD8⁺ T cells are of host origin. Fig. 3. PMID: 11435318.



Immunoprecipitation

Anti-CD40L mAb alone or in combination with (A) sirolimus or (B) CsA results in long-term multilineage engraftment. Fig. 1. PMID: 12384443.



Immunofluorescence Microscopy

Anti-PD-1 antibody plus radiation therapy (RT) cures mice with intracranial GL261-luc tumors. (A) Experimental timeline. (B) Luciferase imaging of 4 distinct mice per treatment arm before treatment (day 7) and after treatment (day 21), divided by treatment group. All images at same scale. All mice individually matched on days 7 and 21. (C) Kaplan-Meier survival curve. P < .05 between RT+anti-PD-1 antibody arm and all other arms. All experiments repeated in triplicate with >6 mice per arm. Fig. 2. PMID: 23462419.

ELISA

Combination therapy with Cy/GVAX and PD-1 or PD-L1 blockade improves clinical outcomes in a PDA mouse model. Anti-PD-1, anti-PD-L1 or IgG (5 mg/kg IP) were administered IP twice weekly until death starting on day 3. (B) Kaplan-Meier survival curves of mice that were implanted with PDA cells and were treated with different combinations of Cy, GVAX and the αPD-1 antibody. The percentages of mice that remained disease free at day 90 following tumor implantation and therapy with (C) Cy, GVAX and/or αPD-1 or (D) Cy, GVAX and αPD-L1 are shown. All the p values were yielded by comparing GVAX and/or αPD-1/αPD-L1 treatment groups with IgG treated group. (E) Kaplan-Meier survival curves of mice that were implanted with Panc02 cells via hemispleen technique and treated with different combinations of Cy, GVAX and αPD-L1 antibody. Data are represented as results obtained from experiments with 8-10 mice per group that were repeated at least twice. Fig 2. PMID: 25415283.

References

- Dimitrios Mathios et al. Therapeutic administration of IL-15 superagonist complex ALT-803 leads to long-term survival and durable antitumor immune response in a murine glioblastoma model. *Int J Cancer*. (2016)
- Dallas B Flies et al. Mechanistic Assessment of PD-1H Coinhibitory Receptor-Induced T Cell Tolerance to Allogeneic Antigens. *J Immunol*. (2015)
- Soares KC et al. PD-1/PD-L1 blockade together with vaccine therapy facilitates effector T-cell infiltration into pancreatic tumors. *J Immunother*. (2015)
- Jing Zeng Anti-PD-1 blockade and stereotactic radiation produce long-term survival in mice with intracranial gliomas. *Int J Radiat Oncol Biol Phys*. (2013)
- Patricia A Taylor et al. Combined effects of calcineurin inhibitors or sirolimus with anti-CD40L mAb on alloengraftment under nonmyeloablative conditions. *Blood*. (2002)
- PA Taylor et al. Requirements for the promotion of allogeneic engraftment by anti-CD154 (anti-CD40L) monoclonal antibody under nonmyeloablative conditions. *Blood*. (2001)

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