9853 Pacific Heights Blvd.
Suite D. San Diego,
CA 92121, USA
Tel: 858-263-4982
Email: info@abeomics.com

12-8505: Anti-Murine Norovirus Capsid — Purified in vivo GOLD™ Functional Grade Antibody (Clone A6.2)

Clonality :	Monoclonal
Clone Name :	A6.2
Application :	ELISA,FACS
Gene :	CD300LF
Gene ID :	AY228235
Uniprot ID :	Q80J94
Format :	Purified
Alternative Name :	Capsid protein VP1
Isotype :	Mouse IgG2a
Immunogen Information :	Brain homogenate containing MNV-1

Description

Specificity: A6.2 activity is directed against the P domain of the mouse norovirus capsid. The A6.2 epitope maps to the A′B′ and E′F′ loops of the P2 subdomain. A6.2 binds to the human- mouse norovirus consensus peptide sequence GWWEDHGQL, which aligns with residues 327 to 335 of P2.

Background: Norovirus, a Caliciviridae virus made up of a single major capsid protein (VP1), causes acute gastroenteritis during infection. The capsid protein is composed of three structural domains: N (N terminus), S (shell), and P (protruding), with the latter further divided into P1 and P2 subdomains. P1 has moderate sequence diversity, while P2 is highly variable. Murine norovirus (MNV-1) is the first norovirus used to study the immune response in animal models and can infect the intestinal tract of mice following oral inoculation. MNV-1 can infect macrophage-like cells *in vivo* and can be cultured in primary dendritic cells and macrophages.

A6.2 was generated from an MNV-1-seropositive 129 mouse injected with brain homogenate containing MNV-1. The spleen was harvested, hybridoma fusion performed, and supernatants screened by ELISA for binding to recombinant MNV-1 capsid.

A6.2 is a neutralizing antibody used for structural analysis of MNV in cryo-EM and NMR studies. Neutralization by A6.2 has also been demonstrated in plaque based assays. A6.2 Fab can also neutralize MNV, albeit with 100 times lower efficacy than the intact antibody, showing that neutralization does not require bivalent binding. Additionally, neutralization of MNV with A6.2 Fab does not induce major conformational changes in the virion. Binding of glycochenodeoxycholic acid to MNV abrogates the neutralization capacity of A6.2. A6.2 is thought to neutralize MNV-1 infection by preventing virion attachment to the cell surface.

Phage-display oligopeptide library screens have been used to map the binding epitope to the P2 subdomain. A6.2 does not react with capsid protein in Western blot analysis, and therefore likely binds to a 3D epitope.

Product Info

Amount :	5mg / 1mg
Purification :	≥95% monomer by analytical SEC·>95% by SDS Page Preparation: Functional grade preclinical antibodies are manufactured in an animal free facility using only in vitro protein free cell culture techniques and are purified by a multi-step process including the use of protein A or G to assure extremely low levels of endotoxins, leachable protein A or aggregates.

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Content :	Concentration: ≥ 5.0 mg/ml Formulation: This monoclonal antibody is aseptically packaged and formulated in 0.01 M phosphate buffered saline (150 mM NaCl) PBS pH 7.2 - 7.4 with no carrier protein, potassium, calcium or preservatives added. Due to inherent biochemical properties of antibodies, certain products may be prone to precipitation over time. Precipitation may be removed by aseptic centrifugation and/or filtration.
Storage condition :	Functional grade preclinical antibodies may be stored sterile as received at 2-8°C for up to one month. For longer term storage, aseptically aliquot in working volumes without diluting and store at ≤ -70°C. Avoid Repeated Freeze Thaw Cycles.

Application Note

Research Use Only