Mouse ASGR1/ASGPR1 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF2755

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse ASGPR1 in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse ASGPR1 Ser60-Asn284 Accession # Q91Y84
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

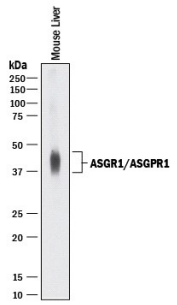
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.25 µg/mL	See Below
Blockade of Receptor-ligand Interaction	In a functional ELISA, 1.5-5 µg/mL of this antibody will block 50% of the binding of 100 ng/mL of biotinylated β-Galactosamine-N-Acetyl-Polyacrylamide to immobilized Recombinant Mouse ASGPR1 (Catalog # 2755-AS) coated at 2.5 µg/mL (100 µL/well). At 30 µg/mL, this antibody will block >90% of the binding.	

DATA

Western Blot



Detection of Mouse ASGR1/ASGPR1 by Western Blot. Western blot shows lysate of mouse liver tissue. PVDF membrane was probed with 0.25 µg/mL of Goat Anti-Mouse ASGR1/ASGPR1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2755) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for ASGR1/ASGPR1 at approximately 40-46 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

The mouse asialoglycoprotein receptor (ASGP-R) is an endocytic recycling receptor that belongs to the long-form subfamily of the C-type/Ca^{++}-dependent lectin family (1-3). It is a complex of two noncovalently-linked subunits, a major 42 kDa glycoprotein (ASGPR1) and a minor 51 kDa glycoprotein (ASGR2). The major mouse ASGP-R subunit, ASGPR1, is synthesized as a 284 amino acid (aa) type II transmembrane (TM) protein that contains a 39 aa cytoplasmic region, a 21 aa TM segment, and a 224 aa extracellular domain (ECD) (4-6). The ECD contains two important structural regions. The first is a stalk region of 56 aa (aa's # 59-117) that contributes to noncovalent oligomerization. The second is a 118 aa, carbohydrate-binding, Ca^{++}-dependent C-type lectin domain (aa's 160-277) that is unusually stabilized by three Ca^{++} ions (3, 5). There are two potential alternate splice forms for ASGPR1. Both are TM and show a deletion of the C-type lectin domain. One is 113 aa in length and shows a deletion of aa's # 114-284 (7). The second is 132 aa in length and shows a deletion of aa's 118-146 and aa's 162 - 284 (8). Mouse ASGPR1 ECD is 89% and 79% aa identical to the ASGPR1 ECD in rat and human, respectively. The minor mouse ASGP-R subunit, ASGR2, is also a C-type lectin that shares the same structural organization as ASGR-1. It is 301 aa in length and has two 45 kDa and 51 kDa differentially-glycosylated isoforms (4, 6, 9). The ECD of ASGR2 is 50% aa identical to the ECD of ASGPR1. Although ASGPR1 and 2 can be expressed individually, a fully functional and stable ASGP-R requires simultaneous expression of both subunits (10-12). The stoichiometry of a functional ASGP-R is suggested to be either a 2:2, 3:1 or 3:2 ratio of ASGPR1:ASGR2 (13, 14). ASGPR1 is reported to bind Gal (non-reducing), GalNAc, and sialic acidα2,6GalNAc (3, 15, 16). This is generally in the context of triantennary or tetraantennary configurations (2).

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