SANTA CRUZ BIOTECHNOLOGY, INC.

ASGPR1 (A-5): sc-393849

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The asialoglycoprotein receptor (ASGPR, also designated hepatic lectin) is a type II integral membrane protein and is expressed in hepatic cells. ASGPR is composed of two homologous subunits, ASGPR1 and ASGPR2, that form multimeric complexes. Both ASGPR1 and ASGPR2 contain four functional domains, which include a cytosolic domain, a transmembrane domain, a stalk domain and a carbohydrate recognition domain (CRD). The CRD allows ASGPR to bind glycoproteins with terminal galactose and N-acetylgalactosamine residues while in the presence of calcium. After binding, the ASGPR-glycoprotein complex is then internalized into the cell, where the receptor and ligand are dissociated and ASGPR returns to the cell membrane. ASGPR can also bind hepatitis B virus (HBV) and mediate the HBV-infection of liver cells. The specific interaction with HBV makes ASGPR a potential target for therapeutic purposes.

REFERENCES

1. Treichel, U., et al. 1995. High-yield purification and characterization of human asialoglycoprotein receptor. Protein Expr. Purif. 6: 251-255.
2. Braun, J.R., et al. 1996. The major subunit of the asialoglycoprotein receptor is expressed on the hepatocellular surface in mice lacking the minor receptor subunit. J. Biol. Chem. 271: 21160-21166.
3. Treichel, U., et al. 1997. Receptor-mediated entry of hepatitis B virus particles into liver cells. Arch. Virol. 142: 493-498.
4. Park, J.H., et al. 1998. Detection of the asialoglycoprotein receptor on cell lines of extrahepatic origin. Biochem. Biophys. Res. Commun. 244: 304-311.

CHROMOSOMAL LOCATION

Genetic locus: ASGR1 (human) mapping to 17p13.1.

SOURCE

ASGPR1 (A-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2-27 at the N-terminus of ASGPR1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ASGPR1 (A-5) is available conjugated to agarose (sc-393849 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-393849 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393849 PE), fluorescein (sc-393849 FITC), Alexa Fluor® 488 (sc-393849 AF488), Alexa Fluor® 546 (sc-393849 AF546), Alexa Fluor® 594 (sc-393849 AF594) or Alexa Fluor® 647 (sc-393849 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393849 AF680) or Alexa Fluor® 790 (sc-393849 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393849 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

ASGPR1 (A-5) is recommended for detection of ASGPR1 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ASGPR1 siRNA (h): sc-29746, ASGPR1 shRNA Plasmid (h): sc-29746-SH and ASGPR1 shRNA (h) Lentiviral Particles: sc-29746-V.

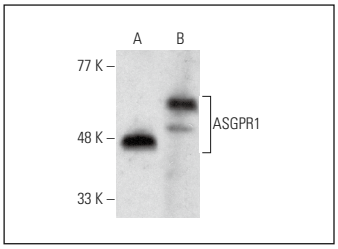
Molecular Weight of ASGPR1: 46 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, rat liver extract: sc-2395 or human liver extract: sc-363766.

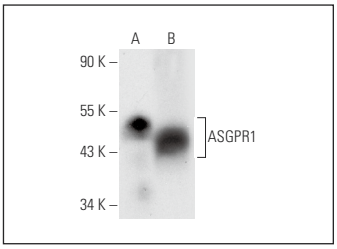
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



ASGPR1 (A-5) HRP: sc-393849 HRP. Direct western blot analysis of ASGPR1 expression in human liver (**A**) and rat liver (**B**) tissue extracts.



ASGPR1 (A-5): sc-393849. Western blot analysis of ASGPR1 expression in Hep G2 whole cell lysate (**A**) and human liver tissue extract (**B**).

SELECT PRODUCT CITATIONS

1. Nakamori, D., et al. 2017. Direct conversion of human fibroblasts into hepatocyte-like cells by ATF5, PROX1, FOXA2, FOXA3, and HNF4A transduction. Sci. Rep. 7: 16675.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.