

ASGPR1/2 (E-1): sc-166633

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/ASGR2 (human) mapping to 17p13.1; Asgr1/Asgr2 (mouse) mapping to 11 B3.

SOURCE

ASGPR1/2 (E-1) is a mouse monoclonal antibody raised against amino acids 1-291 representing full length ASGPR1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ASGPR1/2 (E-1) is available conjugated to agarose (sc-166633 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166633 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166633 PE), fluorescein (sc-166633 FITC), Alexa Fluor® 488 (sc-166633 AF488), Alexa Fluor® 546 (sc-166633 AF546), Alexa Fluor® 594 (sc-166633 AF594) or Alexa Fluor® 647 (sc-166633 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166633 AF680) or Alexa Fluor® 790 (sc-166633 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, ASGPR1/2 (E-1) is available conjugated to biotin (sc-166633 B), 200 µg/ml, for WB, IHC(P) and ELISA.

RESEARCH USE

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

APPLICATIONS

ASGPR1/2 (E-1) is recommended for detection of ASGPR1, ASGPR2 and MASGP-BP of mouse, rat and 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

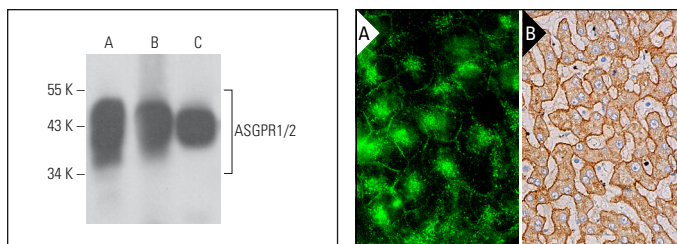
Molecular Weight of ASGPR1/2: 150/95 kDa.

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

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



ASGPR1/2 (E-1): sc-166633. Western blot analysis of ASGPR1/2 expression in Hep G2 whole cell lysate (A) and human fetal liver (B) and rat liver (C) tissue extracts. Detection reagent used: m-IgGκ BP-HRP: sc-516102.

ASGPR1/2 (E-1): sc-166633. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing membrane staining of hepatocytes (B).

SELECT PRODUCT CITATIONS

1. Javanbakht, H., et al. 2018. Liver-targeted anti-HBV single-stranded oligonucleotides with locked nucleic acid potently reduce HBV gene expression *in vivo*. *Mol. Ther. Nucleic Acids* 11: 441-454.

STORAGE

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

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