

ASGPR1 (T-20): sc-13469

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.
5. Julyan, P.J., et al. 1999. Preliminary clinical study of the distribution of HPMA copolymers bearing doxorubicin and galactosamine. *J. Control Release* 57: 281-290.
6. Meier, M., et al. 2000. Crystal structure of the carbohydrate recognition domain of the H1 subunit of the asialoglycoprotein receptor. *J. Mol. Biol.* 300: 857-865.

CHROMOSOMAL LOCATION

Genetic locus: ASGR1 (human) mapping to 17p11; Asgr1 (mouse) mapping to 11 B3.

SOURCE

ASGPR1 (T-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of ASGPR1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-13469 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

ASGPR1 (T-20) is recommended for detection of ASGPR1 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 (m): sc-29747.

Molecular Weight of ASGPR1: 46 kDa.

Positive Controls: mouse thymus extract: sc-2406, CTLL-2 cell lysate: sc-2242 or NIH/3T3 whole cell lysate: sc-2210.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Grewal, P.K., et al. 2008. The Ashwell receptor mitigates the lethal coagulopathy of sepsis. *Nat. Med.* 14: 648-655.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **ASGPR1 (A-5): sc-393849** or **ASGPR1 (8D7): sc-52623**, our highly recommended monoclonal alternatives to ASGPR1 (T-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **ASGPR1 (A-5): sc-393849**.