# Human ASGR1/ASGPR1
# Alexa Fluor® 594-conjugated Antibody

Monoclonal Mouse $IgG_1$ Clone # 950216

Catalog Number: FAB4394T

100 µg

## DESCRIPTION

| | |
|---|---|
| **Species Reactivity** | Human |
| **Specificity** | Detects human ASGR/1ASGPR1 in direct ELISAs. |
| **Source** | Monoclonal Mouse $IgG_1$ Clone # 950216 |
| **Purification** | Protein A or G purified from hybridoma culture supernatant |
| **Immunogen** | Mouse myeloma cell line NS0-derived recombinant human ASGR1/ASGPR1<br>Gln62-Leu291<br>Accession # P07306 |
| **Conjugate** | Alexa Fluor 594<br>Excitation Wavelength: 590 nm<br>Emission Wavelength: 617 nm |
| **Formulation** | Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.<br><br>*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

## 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 |
|---|---|---|
| **Flow Cytometry** | 0.25-1 µg/$10^6$ cells | HepG2 human hepatocellular carcinoma cell line |

## PREPARATION AND STORAGE

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|---|---|
| **Shipping** | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| **Stability & Storage** | **Protect from light. Do not freeze.**<br>• 12 months from date of receipt, 2 to 8 °C as supplied. |

## BACKGROUND

The human asialoglycoprotein receptor (ASGPR) is an endocytic recycling receptor that belongs to the long-form subfamily of the C-type/$Ca^{+2}$-dependent lectin family (1, 2, 3). It is a complex of two noncovalently-linked subunits, a major 46 kDa glycoprotein (ASGR1) and a minor 50 kDa glycoprotein (ASGR2). The major human ASGPR subunit, ASGR1 (also H1), is synthesized as a 291 amino acid (aa) type II transmembrane (TM) glycoprotein. It contains a 40 aa cytoplasmic region, a 21 aa TM segment, and a 230 aa extracellular domain (ECD) (4 - 6). The cytoplasmic region contains one palmitoylation site at Cys36 that is essential for ligand endocytosis and dissociation (7). The ECD contains two important structural regions. The first is a stalk region of 62 aa (aa 61 - 123) that contributes to noncovalent oligomerization. The second is a 118 aa, carbohydrate-binding, $Ca^{+2}$-dependent C-type lectin domain (aa 161 - 278) that is stabilized by three $Ca^{+2}$ ions (3, 8). Human ASGR1 ECD is 79% aa identical to mouse ASGR1 ECD. There are two minor (ASGR2) subunits that interact with ASGR1/H1 in a mutually exclusive manner to generate a functional ASGPR (9). They represent alternate splice forms of a type II TM protein. Termed H2b and H2c, H2b differs from H2c only by the presence of a 19 aa insert in its cytoplasmic region. This insert is significant because it allows serine phosphorylation of the cytoplasmic tail and provides for the majority of ASGPR ligand internalization (9). The stoichiometry of a functional ASGPR is unclear, but is suggested to be either a 2:2, 3:1 or 3:2 ratio of ASGR1/H1:ASGR2/H2 (9, 10, 11). ASGPR is found on hepatocytes and a subset of T cells (6, 12). ASGPR is reported to bind Gal (nonreducing), GalNAc, and sialic acid α2,6Gal and GalNAc (3, 13, 14, 15). This is generally within the context of triantennary or tetraantennary configurations (2). The sialic acid terminations are of particular interest because molecules with these motifs most likely represent the endogenous ligands for ASGPR (14).

**References:**


1. Stockert, R. J. (1995) Physiol. Rev. **75**:591.
2. Weigel, P.H. and J.H.N. Yik (2002) Biochim. Biophys. Acta **1572**:341.
3. Meier, M. *et al.* (2000) J. Mol. Biol. **300**:857.
4. Spiess, M. *et al.* (1985) J. Biol. Chem. **260**:1979.
5. Spiess, M. and H.F. Lodish (1986) Cell **44**:177.
6. Bischoff, J. *et al.* (1988) J. Cell Biol. **106**:1067.
7. Yik, J.H.N. *et al.* (2002) J. Biol. Chem. **277**:40844.
8. Monroe, R.S. and B.E. Huber (1994) Gene **148**:237.
9. Yik, J.H.N. *et al.* (2002) J. Biol. Chem. **277**:23076.
10. Bider, M.D. *et al.* (1996) J. Biol. Chem. **271**:31996.
11. Lodish, H. (1991) Trends Biochem. Sci. **16**:374.
12. Park, J-H. *et al.* (2006) Biotechnol. Lett. **28**:1061.
13. Westerlind, U. *et al.* (2004) Glyconj. J. **21**:227.
14. Park, E.I. *et al.* (2005) Proc. Natl. Acad. Sci. USA **102**:17125.
15. Park, E.I. *et al.* (2003) J. Biol. Chem. **278**:4597.




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## PRODUCT SPECIFIC NOTICES

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