SANTA CRUZ BIOTECHNOLOGY, INC.

HSPC159 (S-12): sc-161079

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Galectins are a family of soluble β-galactoside-binding animal lectins that modulate cell-to-cell adhesion and cell-to-extracellular matrix (ECM) interactions and play a role in tumor progression, pre-mRNA splicing and apoptosis. The galectin-related protein (GRP), also designated HSPC159, is a 172 amino acid protein that contains one galectin domain. However, HSPC159 does not appear to bind carbohydrates or lactose because the critical residues required for binding are not conserved. The gene encoding HSPC159 maps to human chromosome 2, which consists of 237 million bases and makes up approximately 8% of the human genome. A number of genetic diseases are linked to genes on chromosome 2, including Harlequin icthyosis, sitosterolemia and Alström syndrome.

REFERENCES

1. Hillier, L.W., et al. 2005. Generation and annotation of the DNA sequences of human chromosomes 2 and 4. Nature 434: 724-731.
2. Thomas, A.C., et al. 2006. ABCA12 is the major harlequin ichthyosis gene. J. Invest. Dermatol. 126: 2408-2413.
3. Zhou, D., et al. 2006. Expression, purification, crystallization and preliminary X-ray characterization of the GRP carbohydrate-recognition domain from Homo sapiens. Acta Crystallogr. Sect. F Struct. Biol. Cryst. Commun. 62: 474-476.
4. Marshall, J.D., et al. 2007. Alström syndrome. Eur. J. Hum. Genet. 15: 1193-1202.
5. Marshall, J.D., et al. 2007. Spectrum of ALMS1 variants and evaluation of genotype-phenotype correlations in Alström syndrome. Hum. Mutat. 28: 1114-1123.
6. Zhou, D., et al. 2008. Crystal structure of the C-terminal conserved domain of human GRP, a galectin-related protein, reveals a function mode different from those of galectins. Proteins 71: 1582-1588.
7. Wälti, M.A., et al. 2008. Crystal structure of the putative carbohydrate recognition domain of human galectin-related protein. Proteins 72: 804-808.

CHROMOSOMAL LOCATION

Genetic locus: HSPC159 (human) mapping to 2p14; 1110067D22Rik (mouse) mapping to 11 A3.1.

SOURCE

HSPC159 (S-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of HSPC159 of human origin.

STORAGE

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

PROTOCOLS

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

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-161079 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

HSPC159 (S-12) is recommended for detection of HSPC159 of human origin and Grpa of mouse origin and the corresponding rat homolog 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); non cross-reactive with other HSPC family members.

HSPC159 (S-12) is also recommended for detection of HSPC159 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for HSPC159 siRNA (h): sc-94804, Grpa siRNA (m): sc-145780, HSPC159 shRNA Plasmid (h): sc-94804-SH, Grpa shRNA Plasmid (m): sc-145780-SH, HSPC159 shRNA (h) Lentiviral Particles: sc-94804-V and Grpa shRNA (m) Lentiviral Particles: sc-145780-V.

Molecular Weight of HSPC159: 19 kDa.

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.

RESEARCH USE

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