SANTA CRUZ BIOTECHNOLOGY, INC.

HM74B (C-13): sc-109538

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The Power to Question

BACKGROUND

HM74, also known as PUMAG or Puma-G, is a member of the G protein-coupled receptor (GPCR) superfamily. In humans, HM74 is encoded by two different genes (GPR109A and GPR109B) that express two distinct proteins, namely HM74A and HM74B (also known as simply HM74), which are 96% homologous. In mice and rats, only one gene (deisngnated Gpr109a) encodes the HM74 protein. HM74B is a G_i protein-coupled receptor that mediates the metabolic effects of nicotinic acid. Localizing to the cell membrane, HM74B is highly expressed in adipocytes, immune cells and spleen and, like all members of the GPCR superfamily, contains seven transmembrane domains. HM74B lacks the characteristic N-linked glycosylation sites that are present in other GPCR family members and also shows a more diverged amino acid sequence homology from most family members, implying different ligand specificity.

REFERENCES

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5. Pike, N.B. 2005. Flushing out the role of GPR109A (HM74A) in the clinical efficacy of nicotinic acid. J. Clin. Invest. 115: 3400-3403.
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9. Irukayama-Tomobe, Y., et al. 2009. Aromatic D-amino acids act as chemoattractant factors for human leukocytes through a G protein-coupled receptor, GPR109B. Proc. Natl. Acad. Sci. USA 106: 3930-3934.

CHROMOSOMAL LOCATION

Genetic locus: GPR109B (human) mapping to 12q24.31.

SOURCE

HM74B (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of HM74B of human 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-109538 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

HM74B (C-13) is recommended for detection of HM74B of human origin by Western Blotting (starting dilution 1:200, 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); non cross-reactive with HM74A.

Suitable for use as control antibody for HM74 siRNA (h): sc-105529, HM74 shRNA Plasmid (h): sc-105529-SH and HM74 shRNA (h) Lentiviral Particles: sc-105529-V.

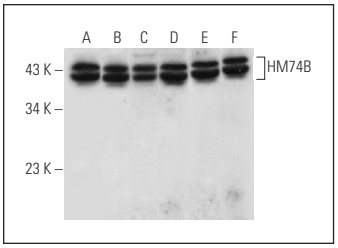
Molecular Weight of HM74B: 44 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, Hep G2 cell lysate: sc-2227 or MOLT-4 cell lysate: sc-2233.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



HM74B (C-13): sc-109538. Western blot analysis of HM74B expression in MOLT-4 (**A**), Jurkat (**B**), Hep G2 (**C**), CCRF-CEM (**D**), K-562 (**E**) and HL-60 (**F**) whole cell lysates.

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.

PROTOCOLS

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