SANTA CRUZ BIOTECHNOLOGY, INC.

HM74 (C-18): sc-48537

SANTA CRUZ BIOTECHNOLOGY

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 produce proteins, namely HM74A and HM74 (or HM74B), which are 96% homologous. In mice and rats, only one gene encodes the HM74 protein (Gpr109a). HM74 is a G_i protein-coupled receptor that mediates the metabolic effects of nicotinic acid. Localizing to the cell membrane, HM74 is highly expressed in adipocytes, immune cells and spleen. Like all members of the GPCR superfamily, HM74 contains seven transmembrane domains. HM74 lacks the N-linked glycosylation sites near the N-terminus that are present in other GPCR family members. Furthermore, HM74 shows a more diverged amino acid sequence homology from most family members, implying different ligand specificity.

REFERENCES

1. Nomura, H., et al. 1993. Molecular cloning of cDNAs encoding a LD78 receptor and putative leukocyte chemotactic peptide receptors. Int. Immunol. 5: 1239-1249.
2. Soga, T., et al. 2003. Molecular identification of nicotinic acid receptor. Biochem. Biophys. Res. Commun. 303: 364-369.
3. Tunaru, S., et al. 2003. PUMA-G and HM74 are receptors for nicotinic acid and mediate its anti-lipolytic effect. Nat. Med. 9: 352-355.
4. Wise, A., et al. 2003. Molecular identification of high and low affinity receptors for nicotinic acid. J. Biol. Chem. 278: 9869-9874.
5. Zellner, C., et al. 2005. Variations in human HM74 (GPR109B) and HM74A (GPR109A) niacin receptors. Hum. Mutat. 25: 18-21.
6. Pike, N.B. 2005. Flushing out the role of GPR109A (HM74A) in the clinical efficacy of nicotinic acid. J. Clin. Invest. 115: 3400-3403.
7. Kamanna, V.S. and Kashyap, M.L. 2007. Nicotinic acid (niacin) receptor agonists: will they be useful therapeutic agents? Am. J. Cardiol. 100: 53-61.

CHROMOSOMAL LOCATION

Genetic locus: GPR109A (human) mapping to 12q24.31.

SOURCE

HM74 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of HM74A 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-48537 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

HM74 (C-18) is recommended for detection of HM74A and 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).

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.

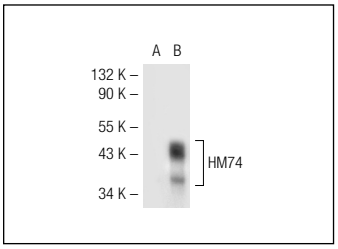
Molecular Weight of HM74: 50 kDa.

Positive Controls: HM74 (h2): 293T Lysate: sc-112151.

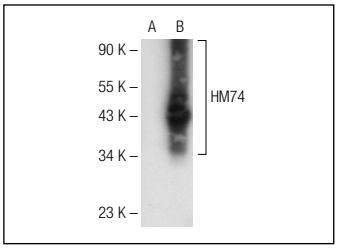
RECOMMENDED SECONDARY REAGENTS

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



HM74 (C-18): sc-48537. Western blot analysis of HM74 expression in non-transfected: sc-117752 (**A**) and human HM74 transfected: sc-112151 (**B**) 293T whole cell lysates.



HM74 (C-18): sc-48537. Western blot analysis of HM74 expression in non-transfected: sc-117752 (**A**) and human HM74 transfected: sc-112381 (**B**) 293T whole cell lysates.

RESEARCH USE

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

MONOS Satisfaction Guaranteed

Try **HM74 (D-8): sc-377292** or **HM74 (A-11): sc-373932**, our highly recommended monoclonal alternatives to HM74 (C-18).