

HM74 (A-11) : sc-373932

BACKGROUND

HM74, also known as PUMAG or Puma- γ , 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 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

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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.
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7. Kamanna, V.S. and Kashyap, M.L. 2007. Nicotinic acid (niacin) receptor agonists: will they be useful therapeutic agents? *Am. J. Cardiol.* 100: S53-S61.
8. Soudijn, W., et al. 2007. Nicotinic acid receptor subtypes and their ligands. *Med. Res. Rev.* 27: 417-433.

CHROMOSOMAL LOCATION

Genetic locus: HCAR2/HCAR3 (human) mapping to 12q24.31.

SOURCE

HM74 (A-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 341-363 at the C-terminus of HM74A of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-373932 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

HM74 (A-11) is recommended for detection of HM74A and HM74B of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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.

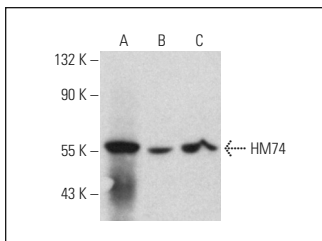
Molecular Weight of HM74: 50 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, K-562 whole cell lysate: sc-2203 or Hep G2 cell lysate: sc-2227.

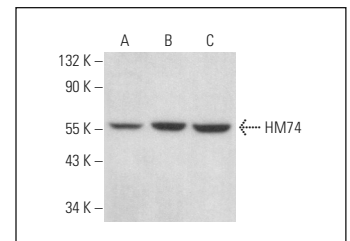
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG λ BP-HRP: sc-516132 or m-IgG λ BP-HRP (Cruz Marker): sc-516132-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG λ BP-FITC: sc-516185 or m-IgG λ BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



HM74 (A-11): sc-373932. Western blot analysis of HM74 expression in Hep G2 (A), Jurkat (B) and K-562 (C) whole cell lysates.



HM74 (A-11): sc-373932. Western blot analysis of HM74 expression in CCRF-CEM (A), MCF7 (B) and HEL 92.1.7 (C) 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 for detailed protocols and support products.