

GPR175 (6H2): sc-134350

BACKGROUND

G protein-coupled receptors (GPRs), also known as seven transmembrane receptors, heptahelical receptors or 7TM receptors, comprise a superfamily of proteins that play a role in many different stimulus-response pathways. G protein-coupled receptors translate extracellular signals into intracellular signals (G protein activation) and they respond to a variety of signaling molecules, such as hormones and neurotransmitters. GPR175 (G protein-coupled receptor 175), also known as TPRA40 or PP6566, is a 373 amino acid multi-pass membrane protein that is ubiquitously expressed and functions as a G protein-coupled receptor. The gene encoding GPR175 maps to human chromosome 3 and is expressed as multiple alternatively spliced isoforms.

REFERENCES

- Larhammar, D., Blomqvist, A.G. and Wahlestedt, C. 1993. The receptor revolution—multiplicity of G protein-coupled receptors. *Drug Des. Discov.* 9: 179-188.
- Ji, T.H., Grossmann, M. and Ji, I. 1998. G protein-coupled receptors. I. Diversity of receptor-ligand interactions. *J. Biol. Chem.* 273: 17299-17302.
- Yang, H., Egan, J.M., Rodgers, B.D., Bernier, M. and Montrose-Rafizadeh, C. 1999. Differential expression of a novel seven transmembrane domain protein in epididymal fat from aged and diabetic mice. *Endocrinology* 140: 2859-2867.
- Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 608336. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Aki, T., Funakoshi, T., Nishida-Kitayama, J. and Mizukami, Y. 2008. TPRA40/GPR175 regulates early mouse embryogenesis through functional membrane transport by Sjögren's syndrome-associated protein NA14. *J. Cell. Physiol.* 217: 194-206.

CHROMOSOMAL LOCATION

Genetic locus: TPRA1 (human) mapping to 3q21.3; Tpra1 (mouse) mapping to 6 D1.

SOURCE

GPR175 (6H2) is a mouse monoclonal antibody raised against recombinant GPR175 protein of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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 for detailed protocols and support products.

APPLICATIONS

GPR175 (6H2) is recommended for detection of GPR175 of mouse, rat and 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GPR175 siRNA (h): sc-77900, GPR175 siRNA (m): sc-145723, GPR175 shRNA Plasmid (h): sc-77900-SH, GPR175 shRNA Plasmid (m): sc-145723-SH, GPR175 shRNA (h) Lentiviral Particles: sc-77900-V and GPR175 shRNA (m) Lentiviral Particles: sc-145723-V.

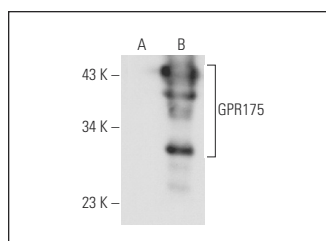
Molecular Weight of GPR175: 33 kDa.

Positive Controls: GPR175 (h2): 293T Lysate: sc-116379 or GPR175 (m): 293T Lysate: sc-120597.

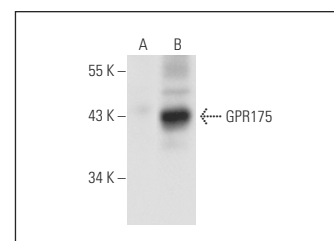
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-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).

DATA



GPR175 (6H2): sc-134350. Western blot analysis of GPR175 expression in non-transfected: sc-117752 (A) and human GPR175 transfected: sc-116379 (B) 293T whole cell lysates.



GPR175 (6H2): sc-134350. Western blot analysis of GPR175 expression in non-transfected: sc-117752 (A) and mouse GPR175 transfected: sc-120597 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Singh, J., Wen, X. and Scales, S.J. 2015. The orphan G protein-coupled receptor Gpr175 (Tpra40) enhances hedgehog signaling by modulating cAMP levels. *J. Biol. Chem.* 290: 29663-29675.

RESEARCH USE

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