

Relaxin Receptor 2 (H-150): sc-50327

BACKGROUND

G protein-coupled receptors (GPRs) are a protein family of transmembrane receptors that transmit an extracellular signal (ligand binding) into an intracellular signal (G protein activation). Relaxin Receptor 2, also known as Relaxin/insulin-like family peptide receptor 2, RXFP2, LGR8, GREAT, GPR106, INSL3R or RXFP2, is a leucine-rich repeat G protein-coupled receptor that binds Relaxins and INSL3 (insulin-like peptide 3). Expressed in brain, muscle, uterus, kidney, thyroid, testis, bone marrow and peripheral blood cells, Relaxin Receptor 2 localizes to the cell membrane and contains ten LRR (leucine-rich) repeats and an LDL-receptor class A domain. Upon Relaxin or INSL3 binding to Relaxin Receptor 2, adenylate (A) cyclase is activated, leading to an increased intracellular concentration of cAMP. cAMP is a key intracellular regulator; it mediates the activities of numerous hormones and plays an important role in modulating cellular activity. Mutations in the gene encoding Relaxin Receptor 2 can lead to cryptorchidism (impaired testicular descent), a condition associated with a higher risk of infertility and testicular cancer.

REFERENCES

- Overbeek, P.A., Gorlov, I.P., Sutherland, R.W., Houston, J.B., Harrison, W.R., Boettger-Tong, H.L., Bishop, C.E. and Agoulnik, A.I. 2001. A transgenic insertion causing cryptorchidism in mice. *Genesis* 30: 26-35.
- Gorlov, I.P., Kamat, A., Bogatcheva, N.V., Jones, E., Lamb, D.J., Truong, A., Bishop, C.E., McElreavey, K. and Agoulnik, A.I. 2002. Mutations of the GREAT gene cause cryptorchidism. *Hum. Mol. Genet.* 11: 2309-2318.
- Kumagai, J., Hsu, S.Y., Matsumi, H., Roh, J.S., Fu, P., Wade, J.D., Bathgate, R.A. and Hsueh, A.J. 2002. INSL3/Leydig Insulin-like peptide activates the LGR8 receptor important in testis descent. *J. Biol. Chem.* 277: 31283-31286.
- Hsu, S.Y., Nakabayashi, K., Nishi, S., Kumagai, J., Kudo, M., Sherwood, O.D. and Hsueh, A.J. 2002. Activation of orphan receptors by the hormone relaxin. *Science* 295: 671-674.
- Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606655. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: LGR8 (human) mapping to 13q13.1; Lgr8 (mouse) mapping to 5 G3.

SOURCE

Relaxin Receptor 2 (H-150) is a rabbit polyclonal antibody raised against amino acids 81-230 mapping within an extracellular domain of Relaxin Receptor 2 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.

RESEARCH USE

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

APPLICATIONS

Relaxin Receptor 2 (H-150) is recommended for detection of Relaxin Receptor 2 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)], 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).

Relaxin Receptor 2 (H-150) is also recommended for detection of Relaxin Receptor 2 in additional species, including equine and canine.

Suitable for use as control antibody for Relaxin Receptor 2 siRNA (h): sc-40179, Relaxin Receptor 2 siRNA (m): sc-40180, Relaxin Receptor 2 shRNA Plasmid (h): sc-40179-SH, Relaxin Receptor 2 shRNA Plasmid (m): sc-40180-SH, Relaxin Receptor 2 shRNA (h) Lentiviral Particles: sc-40179-V and Relaxin Receptor 2 shRNA (m) Lentiviral Particles: sc-40180-V.

Molecular Weight (predicted) of Relaxin Receptor 2: 86 kDa.

Molecular Weight (observed) of Relaxin Receptor 2: 103 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

- Feugang, J.M., Rodriguez-Munoz, J.C., Willard, S.T., Bathgate, R.A. and Ryan, P.L. 2011. Examination of relaxin and its receptors expression in pig gametes and embryos. *Reprod. Biol. Endocrinol.* 9: 10.

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.



Try **Relaxin Receptor 2 (H-4): sc-374293**, our highly recommended monoclonal alternative to Relaxin Receptor 2 (H-150).