

Relaxin Receptor 1 (3E3): sc-293228

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 1, also known as Relaxin/Insulin-like family peptide receptor 1, RXFP1, LGR7 or RXFP1, is a leucine-rich repeat G protein-coupled receptor that binds Relaxins and INSL3 (Insulin-like peptide 3). Expressed in brain, placenta, uterus, kidney, prostate, testis, adrenal, heart, ovary and skin, Relaxin Receptor 1 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 1, 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, including ACTH, Glucagon and epinephrine, and plays an important role in modulating cellular activity. Due to alternative splicing events, two Relaxin Receptor 1 isoforms are expressed.

REFERENCES

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- Halls, M.L., et al. 2007. Relaxin family peptide receptors—former orphans reunite with their parent ligands to activate multiple signalling pathways. *Br. J. Pharmacol.* 150: 677-691.
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CHROMOSOMAL LOCATION

Genetic locus: RXFP1 (human) mapping to 4q32.1.

SOURCE

Relaxin Receptor 1 (3E3) is a mouse monoclonal antibody raised against amino acids 68-162 of Relaxin Receptor 1 of human origin.

PRODUCT

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

APPLICATIONS

Relaxin Receptor 1 (3E3) is recommended for detection of Relaxin Receptor 1 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).

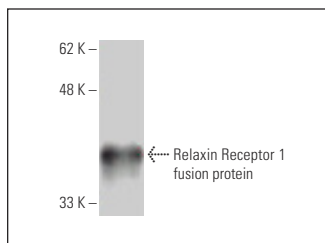
Suitable for use as control antibody for Relaxin Receptor 1 siRNA (h): sc-40177, Relaxin Receptor 1 shRNA Plasmid (h): sc-40177-SH and Relaxin Receptor 1 shRNA (h) Lentiviral Particles: sc-40177-V.

Molecular Weight of Relaxin Receptor 1: 85-95 kDa.

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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Relaxin Receptor 1 (3E3): sc-293228. Western blot analysis of human recombinant Relaxin Receptor 1 fusion protein.

SELECT PRODUCT CITATIONS

- Liu, J., et al. 2020. H3 relaxin protects against calcium oxalate crystal-induced renal inflammatory pyroptosis. *Cell Prolif.* 53: e12902.

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.