SANTA CRUZ BIOTECHNOLOGY, INC.

FSHR (H-190): sc-13935

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Follicle-stimulating hormone receptor (FSHR) is a 695 amino acid G protein-coupled receptor. FSH binds to the receptor in a hand-clasp fashion via its α and β subunits. While the α subunit of FSH is involved in the binding of FSH to the receptor, the β subunit stabilizes this interaction. Linkage studies suggest that a missense mutation in the FSHR gene can cause reduced FSH binding affinity and lead to a condition known as hypergonadotropic ovarian dysgenesis (ODG). In males however, this mutation does not appear to have a detrimental affect on fertility. It is believed that a mutation in the FSHR gene is also associated with ovarian hyperstimulation syndrome; a condition characterized by the presence of multiple serous and hemorrhagic follicular cysts lined by luteinized cells.

REFERENCES

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2. Sugahara, T., et al. 1996. Expression of biologically active fusion genes encoding the common α subunit and either the CG β or FSHβ subunits: role of a linker sequence. Mol. Cell. Endocrinol.125: 71-77.
3. Stanton, P.G., et al. 1996. Structural and functional characterisation of hFSH and hLH isoforms. Mol. Cell. Endocrinol. 125: 133-141.
4. Arnold, C.J., et.al.1998. The human follitropin α-subunit C terminus colaborates with a β-subunit cystine noose and an α-subunit loop to assemble a receptor-binding domain competent for signal transduction. Biochemistry 37: 1762-1768.
5. Baccetti, B., et al. 1998. Localization of human follicle-stimulating hormone in the testis. FASEB J. 12: 1045-1054.
6. Beau, I., et al. 1998. The basolateral localization signal of the follicle-stimulating hormone receptor. J. Biol. Chem. 273: 18610-18616.

CHROMOSOMAL LOCATION

Genetic locus: FSHR (human) mapping to 2p16.3; Fshr (mouse) mapping to 17 E5.

SOURCE

FSHR (H-190) is a rabbit polyclonal antibody raised against amino acids 1-190 of FSHR 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.

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.

APPLICATIONS

FSHR (H-190) is recommended for detection of FSHR 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).

FSHR (H-190) is also recommended for detection of FSHR in additional species, including canine.

Suitable for use as control antibody for FSHR siRNA (h): sc-35415, FSHR siRNA (m): sc-35416, FSHR shRNA Plasmid (h): sc-35415-SH, FSHR shRNA Plasmid (m): sc-35416-SH, FSHR shRNA (h) Lentiviral Particles: sc-35415-V and FSHR shRNA (m) Lentiviral Particles: sc-35416-V.

Molecular Weight of FSHR: 75 kDa.

Positive Controls: rat ovary extract: sc-2399.

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

1. La Rosa, S., et al. 2000. Detection of gonadotropin-releasing hormone receptor in normal human pituitary cells and pituitary adenomas using immunohistochemistry. Virchows Arch. 437: 264-269.
2. Chuang, C.K., et al. 2007. FSH-sensitive murine sertoli cell lines immortalized by human telomerase gene hTERT express the androgen receptor in response to TNF-α stimulation. Biosci. Rep. 27: 403-411.
3. Bucay, N., et al. 2009. A novel approach for the derivation of putative primordial germ cells and sertoli cells from human embryonic stem cells. Stem Cells 27: 68-77.
4. Yan, P., et al. 2009. A novel dominant B-cell epitope of FSHR identified by molecular docking induced specific immune response and suppressed fertility. Gynecol. Endocrinol. 25: 828-838.
5. Swider-Al-Amawi, M., et al. 2010. The immunoexpression of FSH-R in the ductuli efferentes and the epididymis of men and rat: effect of FSH on the morphology and steroidogenic activity of rat epididymal epithelial cells *in vitro*. J. Biomed. Biotechnol. 2010: 506762.
6. Li, X., et al. 2012. Immunoreactivities of androgen receptor, estrogen receptors, p450arom, p450c17 proteins in wild ground squirrels ovaries during the nonbreeding and breeding seasons. J. Ovarian Res. 5: 26.