SANTA CRUZ BIOTECHNOLOGY, INC.

Gonadotropin α (T-14): sc-18222

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Gonadotropin (also designated choriogonadotropin) is a hormone produced by the placenta in the first trimester of pregnancy and exists as a heterodimer formed from a common α chain and a unique β chain. The unique β-chain confers biological specificity to thyrotropin, lutropin, follitropin and gonadotropin. The secreted α subunit maps to human chromosome 6 and the β subunit maps to human chromosome 19. Gonadotropin stimulates the ovaries to produce and maintain normal levels of the steroids essential for maintaining pregnancy, including estrogen and progesterone. Gonadotropin is a member of the cystine knot growth-factor superfamily, a group of proteins that contain a distinct arrangement of six cysteine residues and are expressed in placenta. The proper secretion and dimerization of gonadotropin depends on the conformation of the cystine knot, although biological activity is independent of this conformation.

REFERENCES

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4. Sun, P.D., et al. 1995. The cystine-knot growth-factor superfamily. Ann. Rev. Biophys. Biomol. Struct. 24: 269-291.
5. Furuhashi, M., et al. 1996. Disulfide bonds 7-31 and 59-87 of the α-subunit play a different role in assembly of human chorionic gonadotropin and lutropin. Endocrinology. 137: 4196-4200.
6. Sato, A., et al. 1997. Cystine knot of the gonadotropin α subunit is critical for intracellular behavior but not for *in vitro* biological activity. J. Biol. Chem. 272: 18098-18103.
7. Lustbader, J.W., et al. 1998. Structural and molecular studies of human chorionic gonadotropin and its receptor. Recent Prog. Horm. Res. 53: 395-424.
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CHROMOSOMAL LOCATION

Genetic locus: CGA (human) mapping to 6q14.3; Cga (mouse) mapping to 4 A5.

SOURCE

Gonadotropin α (T-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Gonadotropin α of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-18222 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Gonadotropin α (T-14) is recommended for detection of precursor and mature Gonadotropin α of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Gonadotropin α (T-14) is also recommended for detection of precursor and mature Gonadotropin α in additional species, including equine.

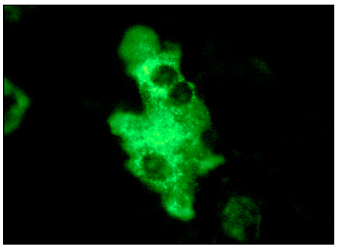
Suitable for use as control antibody for Gonadotropin α siRNA (h): sc-39538, Gonadotropin α siRNA (m): sc-39539, Gonadotropin α shRNA Plasmid (h): sc-39538-SH, Gonadotropin α shRNA Plasmid (m): sc-39539-SH, Gonadotropin α shRNA (h) Lentiviral Particles: sc-39538-V and Gonadotropin α shRNA (m) Lentiviral Particles: sc-39539-V.

Molecular Weight of Gonadotropin α: 23.5 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Gonadotropin α (T-14): sc-18222. Immunofluorescence staining of methanol-fixed JAR cells showing cytoplasmic localization.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.