SANTA CRUZ BIOTECHNOLOGY, INC.

Choriogonadotropin β (N-18): sc-7822

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Choriogonadotropin is a hormone produced by the placenta in the first trimester of pregnancy and exists as a heterodimer formed from a unique β chain and an α chain common to all gonadotropins. The unique β chain confers biological specificity to choriogonadotropin, luteinizing hormone and follicle stimulating hormone. The secreted α subunit maps to human chromosome 6 and the β subunit of choriogonadotropin maps to human chromosome 19. Choriogonadotropin stimulates the ovaries to produce and maintain normal levels of the steroids essential for maintaining pregnancy, including estrogen and progesterone. Choriogonadotropin 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 choriogonadotropin depends on the conformation of the cystine knot, although biological activity is independent of this conformation.

REFERENCES

1. Naylor, S.L., Chin, W.W., Goodman, H.M., Lalley, P.A., Grzeschik, K.H. and Sakaguchi, A.Y. 1983. Chromosome assignment of the genes encoding the α and β subunits of the glycoprotein hormones in man and mouse. Somatic Cell Genet. 9: 757-770.
2. Lapthorn, A.J., Harris, D.C., Littlejohn, A., Lustbader, J.W., Canfield, R.E., Machin, K.J., Morgan, F.J. and Isaacs, N.W. 1994. Crystal structure of human chorionic gonadotropin. Nature 369: 455-461
3. Furuhashi, M., Ando, H., Bielinska, M., Pixley, M.R., Shikone, T., Hsueh, A.J. and Boime, I. 1994. Mutagenesis of cysteine residues in the human Gonadotropin α subunit. Roles of individual disulfide bonds in secretion, assembly, and biologic activity. J. Biol. Chem. 269: 25543-25548.
4. Sun, P.D. and Davies, D.R. 1995. The cystine-knot growth-factor superfamily. Ann. Rev. Biophys. Biomol. Struct. 24: 269-291.

CHROMOSOMAL LOCATION

Genetic locus: CGB/CGB8/CGB5/CGB1/CGB2 (human) mapping to 19q13.33.

SOURCE

Choriogonadotropin β (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Choriogonadotropin β 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.

Blocking peptide available for competition studies, sc-7822 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

Choriogonadotropin β (N-18) is recommended for detection of Choriogonadotropin β of 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), immunohistochemistry (including paraffin-embedded sections) (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 Choriogonadotropin β siRNA (h): sc-39540, Choriogonadotropin β shRNA Plasmid (h): sc-39540-SH and Choriogonadotropin β shRNA (h) Lentiviral Particles: sc-39540-V.

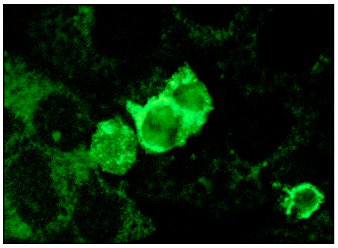
Molecular Weight of Choriogonadotropin β: 38 kDa.

Positive Controls: TT whole cell lysate: sc-364195 or OV-90 whole cell lysate: sc-364191.

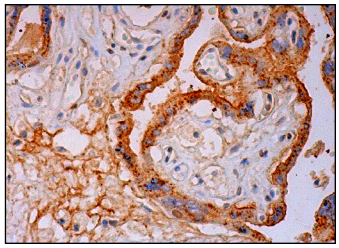
RECOMMENDED SECONDARY REAGENTS

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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



Choriogonadotropin β (N-18): sc-7822. Immunofluorescence staining of methanol-fixed JAR cells showing cell surface localization.



Choriogonadotropin β (N-18): sc-7822. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing membrane and cytoplasmic staining of trophoblastic cells and extracellular staining of connective tissue.

STORAGE

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