

# Choriogonadotropin $\beta$ (C-15): sc-54168

## BACKGROUND

Choriogonadotropin is a hormone produced by the placenta in the first trimester of pregnancy and exists as a heterodimer formed from a unique  $\beta$  chain and an  $\alpha$  chain common to all gonadotropins. The unique  $\beta$  chain confers biological specificity to Choriogonadotropin, luteinizing hormone and follicle stimulating hormone. The secreted  $\alpha$  subunit maps to human chromosome 6 and the  $\beta$  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

- 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  $\alpha$  and  $\beta$  subunits of the glycoprotein hormones in man and mouse. *Somatic Cell Genet.* 9: 757-770.
- 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
- 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  $\alpha$  subunit. Roles of individual disulfide bonds in secretion, assembly, and biologic activity. *J. Biol. Chem.* 269: 25543-25548.

## CHROMOSOMAL LOCATION

Genetic locus: CGB (human) mapping to 19q13.32.

## SOURCE

Choriogonadotropin  $\beta$  (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Choriogonadotropin  $\beta$  of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-54168 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

Choriogonadotropin  $\beta$  (C-15) is recommended for detection of Choriogonadotropin  $\beta$  of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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); non cross-reactive with luteinizing hormone.

Suitable for use as control antibody for Choriogonadotropin  $\beta$  siRNA (h): sc-39540, Choriogonadotropin  $\beta$  shRNA Plasmid (h): sc-39540-SH and Choriogonadotropin  $\beta$  shRNA (h) Lentiviral Particles: sc-39540-V.

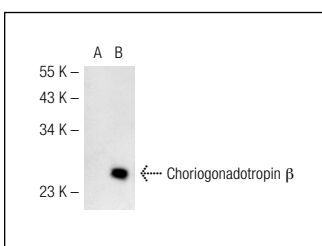
Molecular Weight of Choriogonadotropin  $\beta$ : 38 kDa.

Positive Controls: Choriogonadotropin  $\beta$  (h): 293T Lysate: sc-111665, 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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



Choriogonadotropin  $\beta$  (C-15): sc-54168. Western blot analysis of Choriogonadotropin  $\beta$  expression in non-transfected: sc-117752 (A) and human Choriogonadotropin  $\beta$  transfected: sc-111665 (B) 293T whole cell lysates.

## RESEARCH USE

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

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Try **Choriogonadotropin  $\beta$  (B-4): sc-271062** or **Choriogonadotropin  $\beta$  (ME-107): sc-57067**, our highly recommended monoclonal alternatives to Choriogonadotropin  $\beta$  (C-15).