

Choriogonadotropin β (h): 293T Lysate: sc-111665

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 (LH) and follicle stimulating hormone (FSH). 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

- 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.
- 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 α subunit. Roles of individual disulfide bonds in secretion, assembly, and biologic activity. *J. Biol. Chem.* 269: 25543-25548.
- Sun, P.D. and Davies, D.R. 1995. The cystine-knot growth-factor superfamily. *Annu. Rev. Biophys. Biomol. Struct.* 24: 269-291.
- Furuhashi, M., Suzuki, S. and Suganuma, N. 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.
- Sato, A., Perlas, E., Ben-Menahem, D., Kudo, M., Pixley, M.R., Furuhashi, M., Hsueh, A.J. and Boime, I. 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.
- Lustbader, J.W., Lobel, L., Wu, H. and Elliott, M.M. 1998. Structural and molecular studies of human chorionic Gonadotropin and its receptor. *Recent Prog. Horm. Res.* 53: 395-424.
- Väänänen, J.E., Väänänen, C.C., Lee, S., Yuen, B.H. and Leung, P.C. 1998. Regulation of prostaglandin F $_{2\alpha}$ -receptor mRNA in human granulosa-luteal cells by human chorionic Gonadotrophin and prostaglandin F $_{2\alpha}$. *Endocrine* 8: 261-267.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

CHROMOSOMAL LOCATION

Genetic locus: CGB (human) mapping to 19q13.33.

PRODUCT

Choriogonadotropin β (h): 293T Lysate represents a lysate of human Choriogonadotropin β transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

Choriogonadotropin β (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Choriogonadotropin β antibodies. Recommended use: 10-20 μ l per lane.

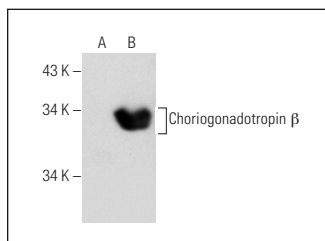
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Choriogonadotropin β (B-4): sc-271062 is recommended as a positive control antibody for Western Blot analysis of enhanced human Choriogonadotropin β expression in Choriogonadotropin β transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

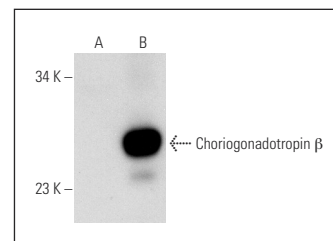
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.

DATA



Choriogonadotropin β (B-4): sc-271062. Western blot analysis of Choriogonadotropin β expression in non-transfected: sc-117752 (A) and human Choriogonadotropin β transfected: sc-111665 (B) 293T whole cell lysates.



Choriogonadotropin β (ME-107): sc-57067. Western blot analysis of Choriogonadotropin β expression in non-transfected: sc-117752 (A) and human Choriogonadotropin β transfected: sc-111665 (B) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.