

# Choriogonadotropin Holo c3 (INN-hCG-45): sc-57060

## 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. It 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

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2. Laphorn, A.J., et al. 1994. Crystal structure of human chorionic gonadotropin. *Nature* 369: 455-461.
3. Furuhashi, M., et al. 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.
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6. Sato, A., et al. 1997. Cystine knot of the Gonadotropin  $\alpha$  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: CGB8 (human) mapping to 19q13.33.

## SOURCE

Choriogonadotropin Holo c3 (INN-hCG-45) is a mouse monoclonal antibody raised against Choriogonadotropin of human origin.

## RESEARCH USE

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

## PRODUCT

Each vial contains 100  $\mu$ g IgG $_1$  in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

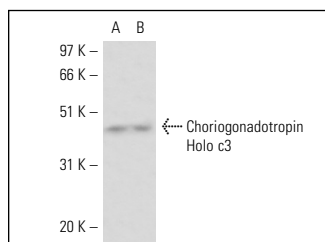
## APPLICATIONS

Choriogonadotropin Holo c3 (INN-hCG-45) is recommended for detection of the c3 epitope on Holo Choriogonadotropin 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of Choriogonadotropin Holo c3: 38 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, TT whole cell lysate: sc-364195 or JAR cell lysate: sc-2276.

## DATA



Choriogonadotropin Holo c3 (INN-hCG-45): sc-57060. Western blot analysis of Choriogonadotropin Holo c3 expression in JAR (A) and TT (B) whole cell lysates.

## 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) for detailed protocols and support products.