SANTA CRUZ BIOTECHNOLOGY, INC.

Placental lactogen I (L-18): sc-34711

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Placental lactogens, also referred to as chorionic somatomammotropin hormones, are protein hormones. They are produced in the mammalian placenta and are similar in structure and function to growth hormones. Together, placental lactogens and growth factors play an essential role to assure successful lactation after pregnancy. Placental lactogens also modify the metabolic state of the mother during pregnancy to supply energy to the fetus. Placental lactogen I is a member of the somatotropin/prolactin family of hormones. The proteins in this family are crucial in mammalian growth control. Placental lactogen I is expressed primarily during mid-pregnancy, and it has been reported that DNA methylation regulates its tissue expression in rats. Placental lactogen II is expressed later in pregnancy and, in mice, its secretion is regulated by the inhibitory control of GH, the concentration of which increases rapidly at the beginning of the last half of pregnancy.

REFERENCES

1. Shida, M.M., et al. 1993. Trophoblast-specific transcription from the mouse Placental lactogen I gene promoter. Mol. Endocrinol. 7: 181-188.
2. Farnsworth, R.L., et al. 1998. Calcyclin in the mouse decidua: expression and effects on placental lactogen secretion. Biol. Reprod. 59: 546-552.
3. Cho, J.H., et al. 2001. DNA methylation regulates Placental lactogen I gene expression. Endocrinology 142: 3389-3396.
4. Sulovic, V., et al. 2002. Placental proteins and protein hormones in high risk pregnancies. Glas. Srp. Akad. Nauka Med. 47: 1-19.

CHROMOSOMAL LOCATION

Genetic locus: Csh1 (mouse) mapping to 13 A3.1.

SOURCE

Placental lactogen I (L-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Placental lactogen I of mouse 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-34711 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Placental lactogen I (L-18) is recommended for detection of precursor and mature Placental lactogen I of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

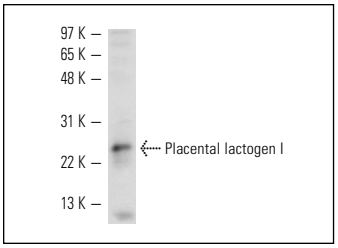
Molecular Weight of Placental lactogen I: 26 kDa.

Positive Controls: mouse embryo extract: sc-364239.

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



Placental lactogen I (L-18): sc-34711. Western blot analysis of Placental lactogen I expression in mouse embryo tissue extract.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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