**Placental lactogen I (C-12): sc-376436**

**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**


**CHROMOSOMAL LOCATION**

Genetic locus: CSH1/CSH2 (human) mapping to 17q23.3; Prl3d1/Prl3d2/Prl3d3 (mouse) mapping to 13 A3.1.

**SOURCE**

Placental lactogen I (C-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 41-75 near the N-terminus of Placental lactogen I of mouse origin.

**PRODUCT**

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Blocking peptide available for competition studies, sc-376436 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

**APPLICATIONS**

Placental lactogen I (C-12) is recommended for detection of precursor and mature Placental lactogen I of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), 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 1:30-1:300). Molecular Weight of Placental lactogen I: 26 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, A549 cell lysate: sc-2413 or MCF7 whole cell lysate: sc-2206.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:

1) Western Blotting: use m-IgGx BP-HRP: sc-516102 or m-IgGx 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. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGx BP-FITC: sc-516140 or m-IgGx BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGx BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohisto-mount: sc-45086, or Organo/Limonene Mount: sc-45087.

**DATA**

![Western blot analysis of Placental lactogen I expression in NIH/3T3 (A), A549 (B) and MCF7 (C) whole cell lysates.](image1)

![Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta showing cytoplasmic staining of trophoblastic cells (A, B).](image2)

**SELECT PRODUCT CITATIONS**


**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 for detailed protocols and support products.