INSL4 (P-16): sc-50007



The Power to Question

BACKGROUND

Insulin is a secreted peptide hormone that elicits metabolic effects such as increases in glucose uptake and glycogen synthesis leading to a decrease in blood glucose concentration. Insulin is first formed as a precursor molecule, preproinsulin, which is later cleaved to proinsulin and finally to the mature insulin hormone. Insulin-like peptides (INSL proteins), also designated Relaxin-like factors, are members of the insulin family, which regulate cell growth, metabolism and tissue-specific functions. INSL1-7 are mostly secreted proteins that are expressed mainly in testis, placenta, uterus or prenatal tissues. INSL4 is a 139 amino acid secreted protein expressed in the placenta, uterus and in fetal perichondrium. It may play an important role in the regulation of bone formation and in trophoblast development.

REFERENCES

- 1. Chassin, D., Laurent, A., Janneau, J.L., Berger, R. and Bellet, D. 1996. Cloning of a new member of the insulin gene superfamily (INSL4) expressed in human placenta. Genomics 29: 465-470.
- Bellet, D., Lavaissiere, L., Mock, P., Laurent, A., Sabourin, J.C., Bedossa, P., Le Bouteiller, P., Frydman, R., Troalen, F. and Bidart, J.M. 1997. Identification of pro-EPIL and EPIL peptides translated from insulin-like 4 (INSL4) mRNA in human placenta. J. Clin. Endocrinol. Metab. 82: 3169-3172.
- Laurent, A., Rouillac, C., Delezoide, A.L., Giovangrandi, Y., Vekemans, M., Bellet, D., Abitbol, M. and Vidaud, M. 1999. Insulin-like 4 (INSL4) gene expression in human embryonic and trophoblastic tissues. Mol. Reprod. Dev. 51: 123-129.
- Bièche, I., Laurent, A., Laurendeau, I., Duret, L., Giovangrandi, Y., Frendo, J.L., Olivi, M., Fausser, J.L., Evain-Brion, D. and Vidaud, M. 2003. Placentaspecific INSL4 expression is mediated by a human endogenous element. Biol. Reprod. 68: 1422-1429.
- Wilkinson, T.N. 2005. Evolution of the Relaxin-like peptide family. BMC. Evol. Biol. 5: 14.
- Faye, A. 2005. Evaluation of the placental environment with a new *in vitro* model of histocultures of early and term placentae: determination of cytokine and Chemokine expression profiles. Placenta 26: 262-267.
- 7. Millar, L. 2005. Early placental insulin-like protein (INSL4 or EPIL) in placental and fetal membrane growth. Biol. Reprod. 73: 695-702.
- 8. Hsu, S.Y. 2005. Evolution of the signaling system in Relaxin-family peptides. Ann. N. Y. Acad. Sci. 1041: 520-529.
- 9. Wilkinson, T.N. 2005. Evolution of the Relaxin-like peptide family: from neuropeptide to reproduction. Ann. N. Y. Acad. Sci. 1041: 530-533.

CHROMOSOMAL LOCATION

Genetic locus: INSL4 (human) mapping to 9p24.

SOURCE

INSL4 (P-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of INSL4 of human 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-50007 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

INSL4 (P-16) is recommended for detection of INSL4, B chain of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Suitable for use as control antibody for INSL4 siRNA (h): sc-60856.

Molecular Weight of INSL4: 17 kDa.

RECOMMENDED SECONDARY REAGENTS

o ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat lgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat lgG-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) Immunofluorescence: use donkey anti-goat lgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat lgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941

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.

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