

# INSL4 (FL-139): sc-67189

## 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, proinsulin, 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 (insulin-like peptide 4) 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

- 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-EPIP and EPIP 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. Placenta-specific INSL4 expression is mediated by a human endogenous element. *Biol. Reprod.* 68: 1422-1429.
- Hsu, S.Y. 2005. Evolution of the signaling system in Relaxin-family peptides. *Ann. N.Y. Acad. Sci.* 1041: 520-529.
- Wilkinson, T.N. 2005. Evolution of the Relaxin-like peptide family: from neuropeptide to reproduction. *Ann. N.Y. Acad. Sci.* 1041: 530-533.
- Millar, L. 2005. Early placental Insulin-like protein (INSL4 or EPIP) in placental and fetal membrane growth. *Biol. Reprod.* 73: 695-702.
- 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

INSL4 (FL-139) is a rabbit polyclonal antibody raised against amino acids 1-139 representing full length 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.

## APPLICATIONS

INSL4 (FL-139) is recommended for detection of INSL4, A chain of human 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).

Suitable for use as control antibody for INSL4 siRNA (h): sc-60856, INSL4 shRNA Plasmid (h): sc-60856-SH and INSL4 shRNA (h) Lentiviral Particles: sc-60856-V.

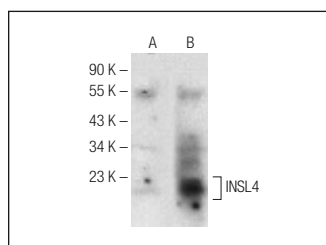
Molecular Weight of INSL4: 17 kDa.

Positive Controls: human INSL4 transfected HEK293T whole cell lysate.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



INSL4 (FL-139): sc-67189. Western blot analysis of INSL4 expression in non-transfected (A) and human INSL4 transfected (B) HEK293T 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.

## RESEARCH USE

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