

# Proliferin (E-10): sc-271891

## BACKGROUND

Various hormones are secreted from the anterior pituitary during development and growth, including Prolactin, luteinizing hormone (LH), thyroid-stimulating hormone (TSH) and the Proliferins. In rodents, there are four Proliferin proteins, designated Proliferin-1, Proliferin-2, Proliferin-3 and Proliferin-4, all of which are secreted and are thought to play a role in embryonic development. More specifically, the Proliferins provide a growth signals to target cells in fetal and maternal tissues during the mid-gestation phase of embryogenesis.

## REFERENCES

1. Linzer, D.I. and Nathans, D. 1984. Nucleotide sequence of a growth-related mRNA encoding a member of the Prolactin-growth hormone family. *Proc. Natl. Acad. Sci. USA* 81: 4255-4259.
2. Linzer, D.I. and Mordacq, J.C. 1987. Transcriptional regulation of Proliferin gene expression in response to serum in transfected mouse cells. *EMBO J.* 6: 2281-2288.

## CHROMOSOMAL LOCATION

Genetic locus: Prl2c2/Prl2c3/Prl2c4 (mouse) mapping to 13 A1.

## SOURCE

Proliferin (E-10) is a mouse monoclonal antibody raised against amino acids 31-139 mapping near the N-terminus of Proliferin of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Proliferin (E-10) is available conjugated to agarose (sc-271891 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271891 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271891 PE), fluorescein (sc-271891 FITC), Alexa Fluor® 488 (sc-271891 AF488), Alexa Fluor® 546 (sc-271891 AF546), Alexa Fluor® 594 (sc-271891 AF594) or Alexa Fluor® 647 (sc-271891 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271891 AF680) or Alexa Fluor® 790 (sc-271891 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## RESEARCH USE

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

## APPLICATIONS

Proliferin (E-10) is recommended for detection of Proliferin-1, Proliferin-2 and Proliferin-3 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

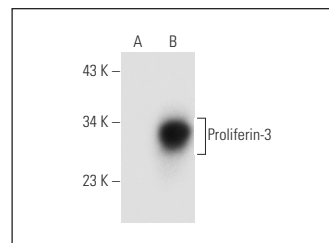
Molecular Weight of Proliferin: 28 kDa.

Positive Controls: mouse placenta extract: sc-364247 or Proliferin-3 (m): 293T Lysate: sc-122788.

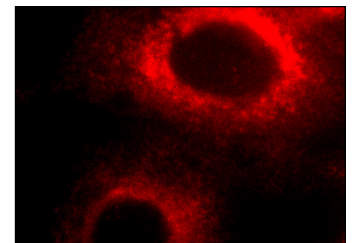
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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 A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



Proliferin (E-10): sc-271891. Western blot analysis of Proliferin-3 expression in non-transfected: sc-117752 (A) and mouse Proliferin-3 transfected: sc-122788 (B) 293T whole cell lysates.



Proliferin (E-10): sc-271891. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. Rivron, N.C., et al. 2018. Blastocyst-like structures generated solely from stem cells. *Nature* 557: 106-111.
2. Hu, L., et al. 2019. PLF-1 (Proliferin-1) modulates smooth muscle cell proliferation and development of experimental intimal hyperplasia. *J. Am. Heart Assoc.* 8: e005886.
3. Yang, F., et al. 2020. DUX-miR-344-ZMYM2-mediated activation of MERV1 LTRs induces a totipotent 2C-like state. *Cell Stem Cell* 26: 234-250.e7.
4. Taguchi, K., et al. 2020. Role of small proliferative adipocytes: possible beige cell progenitors. *J. Endocrinol.* 245: 65-78.
5. Shen, H., et al. 2021. Mouse totipotent stem cells captured and maintained through spliceosomal repression. *Cell* 184: 2843-2859.e20.
6. Goto, H., et al. 2021. Proliferin-1 ameliorates cardiotoxin-related skeletal muscle repair in mice. *Stem Cells Int.* 2021: 9202990.
7. Zhang, W., et al. 2022. Rif1 and Hmgn3 regulate the conversion of murine trophoblast stem cells. *Cell Rep.* 38: 110570.
8. Sallais, J., et al. 2022. HIF1 inhibitor acriflavine rescues early-onset preeclampsia phenotype in mice lacking placental prolyl hydroxylase domain protein-2. *JCI Insight.* E-published.

## STORAGE

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

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA