

## Plfr (F-8): sc-393277

### BACKGROUND

Plfr (proliferin-related protein), also known as PRP, PLF-RP or Prolactin-7D1, is a glycoprotein belonging to the somatotropin/prolactin family of growth hormones. Plfr shares significant homology with all members of this family. Plfr is a potent placental antiangiogenic hormone secreted during mid to late gestation (peaking at day 12) in response to several angiogenic factors. In contrast to Proliferin, a promoter of placental neovascularization, Plfr may function to limit endothelial invasiveness and regulate the cessation of placental neovascularization. Plfr is produced by murine giant cells and spongiotrophoblasts. This localization suggests that Plfr may act to generate a barrier zone, preventing the criss-crossing of maternal blood vessels extending from the uterus and fetal vessels extending from the placenta. Although a human Plfr has not been characterized, the mouse hormone can induce antiangiogenic effects on human endothelial cells. This suggests that the Plfr signaling pathway is conserved between mouse and human.

### REFERENCES

1. Linzer, D.I. and Nathans, D. 1985. A new member of the prolactin-growth hormone gene family expressed in mouse placenta. *EMBO J.* 4: 1419-1423.
2. Jackson, D., et al. 1995. Stimulation and inhibition of angiogenesis by placental Proliferin and Proliferin-related protein. *Science* 266: 1581-1584.
3. Yamaguchi, M., et al. 1995. Cyclic adenosine 3',5'-monophosphate stimulation of placental Proliferin and Proliferin-related protein secretion. *Endocrinology* 136: 2040-2046.
4. Linzer, D.I. and Fisher, S.J. 1999. The placenta and the prolactin family of hormones: regulation of the physiology of pregnancy. *Mol. Endocrinol.* 13: 837-840.
5. Sahgal, N., et al. 2000. Identification of two new nonclassical members of the rat prolactin family. *J. Mol. Endocrinol.* 24: 95-108.

### CHROMOSOMAL LOCATION

Genetic locus: Prl7d1 (mouse) mapping to 13 A3.1.

### SOURCE

Plfr (F-8) is a mouse monoclonal antibody raised against amino acids 124-244 mapping at the C-terminus of Plfr 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.

Plfr (F-8) is available conjugated to agarose (sc-393277 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393277 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393277 PE), fluorescein (sc-393277 FITC), Alexa Fluor® 488 (sc-393277 AF488), Alexa Fluor® 546 (sc-393277 AF546), Alexa Fluor® 594 (sc-393277 AF594) or Alexa Fluor® 647 (sc-393277 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393277 AF680) or Alexa Fluor® 790 (sc-393277 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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### APPLICATIONS

Plfr (F-8) is recommended for detection of Plfr of mouse 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).

Suitable for use as control antibody for Plfr siRNA (m): sc-106420, Plfr shRNA Plasmid (m): sc-106420-SH and Plfr shRNA (m) Lentiviral Particles: sc-106420-V.

Molecular Weight of Plfr: 24 kDa.

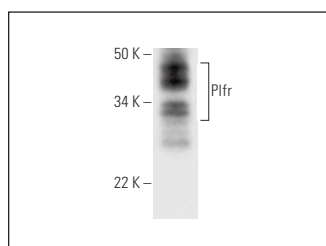
Molecular Weight of glycosylated Plfr: 36-50 kDa.

Positive Controls: mouse placenta extract: sc-364247.

### 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



Plfr (F-8): sc-393277. Western blot analysis of Plfr expression in mouse placenta 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](http://www.scbt.com) for detailed protocols and support products.