

Prolactin (E-9): sc-48383

BACKGROUND

The anterior pituitary secretes a variety of hormones that are involved in cell growth, differentiation and development. Prolactin, a 226 amino acid protein, plays a role in multiple processes, including cell growth, reproduction and immune function. Full length Prolactin, as well as an alternative splice product lacking the third exon, are secreted by endothelial cells involved in angiogenesis. In addition to its role in mammary development and lactation, Prolactin is known to play a role in the development of mammary cancer, acting as both a mitogen and a differentiating agent. Prolactin has also been shown to enhance the proliferation of B cell hybridomas, leading to an overall increase in antibody production. In addition, Prolactin has been demonstrated to reverse the antiproliferative effects of the immunosuppressive cytokine TGF- β . Prolactin is also associated with a variety of autoimmune diseases, including arthritis and type 1 diabetes.

REFERENCES

- Goffin, V., et al. 1998. Prolactin: a hormone at the crossroads of neuroimmunocrinology. *Ann. N.Y. Acad. Sci.* 840: 498-509.
- Clapp, C., et al. 1998. Expression of Prolactin mRNA and of Prolactin-like proteins in endothelial cells: evidence for autocrine effects. *J. Endocrinol.* 158: 137-144.

CHROMOSOMAL LOCATION

Genetic locus: PRL (human) mapping to 6p22.3.

SOURCE

Prolactin (E-9) is a mouse monoclonal antibody raised against amino acids 96-200 of Prolactin of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Prolactin (E-9) is recommended for detection of Prolactin of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 Prolactin siRNA (h): sc-37214, Prolactin shRNA Plasmid (h): sc-37214-SH and Prolactin shRNA (h) Lentiviral Particles: sc-37214-V.

Molecular Weight of Prolactin: 27 kDa.

Positive Controls: Prolactin (h): 293T Lysate: sc-170124, human pituitary tissue extract or BT-20 cell lysate: sc-2223.

RESEARCH USE

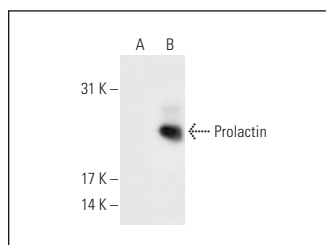
For research use only, not for use in diagnostic procedures.

RECOMMENDED SUPPORT REAGENTS

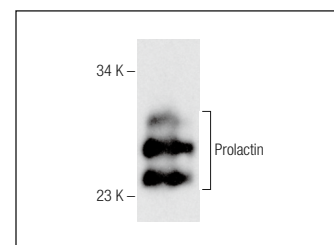
To ensure optimal results, the following support reagents are recommended:

- Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.
- Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
- Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



Prolactin (E-9): sc-48383. Western blot analysis of Prolactin expression in non-transfected: sc-117752 (A) and human Prolactin transfected: sc-170124 (B) 293T whole cell lysates.



Prolactin (E-9): sc-48383. Western blot analysis of Prolactin expression in human pituitary tissue extract.

SELECT PRODUCT CITATIONS

- Lopez-Pulido, E.I., et al. 2013. High expression of Prolactin receptor is associated with cell survival in cervical cancer cells. *Cancer Cell Int.* 13: 103.
- Ramírez De Arellano, A., et al. 2018. A 60 kDa Prolactin variant secreted by cervical cancer cells modulates apoptosis and cytokine production. *Oncol. Rep.* 39: 1253-1260.
- Riera-Leal, A., et al. 2018. Effects of 60 kDa Prolactin and estradiol on metabolism and cell survival in cervical cancer: co-expression of their hormonal receptors during cancer progression. *Oncol. Rep.* 40: 3781-3793.
- Galván-Ramírez, M.L., et al. 2019. Hormonal modulation of *Toxoplasma gondii* infection: regulation of hormonal receptors and cytokine production in THP-1 cells. *Exp. Parasitol.* 204: 107721.
- Dandawate, P., et al. 2020. Diphenylbutylpiperidine antipsychotic drugs inhibit Prolactin receptor signaling to reduce growth of pancreatic ductal adenocarcinoma in mice. *Gastroenterology* 158: 1433-1449.e27.
- Pereira-Suárez, A.L., et al. 2022. 17 β -estradiol modulates the expression of hormonal receptors on THP-1 *T. gondii*-infected macrophages and monocytes in an AKT and ERK-dependent manner. *Mol. Biochem. Parasitol.* 247: 111433.

STORAGE

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