

Prolactin (PRL-151): sc-69875

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 neuro-immunoendocrinology. *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.
- Vonderhaar, B.K. 1998. Prolactin: the forgotten hormone of human breast cancer. *Pharmacol. Ther.* 79: 169-178.
- Richards, S.M., et al. 1998. Prolactin is an antagonist of TGF β activity and promotes proliferation of murine B cell hybridomas. *Cell. Immunol.* 184: 85-91.
- Neidhart, M. 1998. Prolactin in autoimmune diseases. *Proc. Soc. Exp. Biol. Med.* 217: 408-419.
- Cohen, A.D., et al. 2000. Prolactin serum level in patients with breast cancer. *Isr. Med. Assoc. J.* 2: 287-289.
- Yazawa, T., et al. 2000. Prolactin induces apoptosis in the penultimate spermatogonial stage of the testes in Japanese red-bellied newt (*Cynops pyrrhogaster*). *Endocrinology* 141: 2027-2032.
- Pearce, S., et al. 2003. Prolactin, Prolactin receptor and uncoupling proteins during fetal and neonatal development. *Proc. Nutr. Soc.* 62: 421-427.
- Oberbeck, R., et al. 2003. Prolactin modulates survival and cellular immune functions in septic mice. *J. Surg. Res.* 113: 248-256.

CHROMOSOMAL LOCATION

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

SOURCE

Prolactin (PRL-151) is a mouse monoclonal antibody raised against 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 (PRL-151) is recommended for detection of Prolactin of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

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.

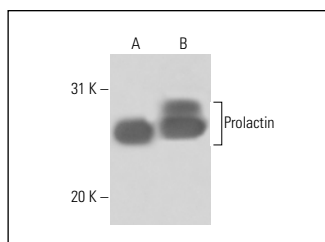
Molecular Weight of Prolactin: 27 kDa.

Positive Controls: human pituitary tissue extract or BT-20 cell lysate: sc-2223.

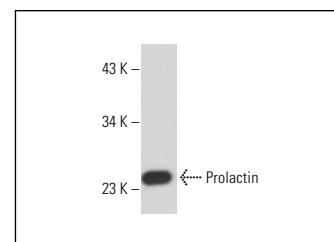
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) 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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



Prolactin (PRL-151): sc-69875. Western blot analysis of human recombinant Prolactin (A) and Prolactin expression in human pituitary tissue extract (B).



Prolactin (PRL-151): sc-69875. Western blot analysis of human recombinant Prolactin.

SELECT PRODUCT CITATIONS

- Nava, M., et al. 2019. Transcriptomic and ChIP-sequence interrogation of EGFR signaling in HER2⁺ breast cancer cells reveals a dynamic chromatin landscape and S100 genes as targets. *BMC Med. Genomics* 12: 32.
- Nava, M., et al. 2019. Utilization of NGS technologies to investigate transcriptomic and epigenomic mechanisms in trastuzumab resistance. *Sci. Rep.* 9: 5141.

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 for detailed protocols and support products.