



PRL-R (G-20): sc-34516

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. Prolactin reverses 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. The receptor for prolactin (PRL-R) belongs to the cytokine receptor superfamily. PRL-R is activated by ligand-induced homodimerization and subsequent cell signaling through the JAK/Stat pathway. The gene encoding human PRL-R maps to chromosome 5p13.2.

REFERENCES

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3. Goffin, V., et al. 1997. The prolactin/growth hormone receptor family: structure/function relationships. *J. Mammary Gland Biol. Neoplasia* 2: 7-17.
4. Neidhart, M. 1998. Prolactin in autoimmune diseases. *Proc. Soc. Exp. Biol. Med.* 217: 408-419.
5. Goffin, V., et al. 1998. Prolactin: a hormone at the crossroads of neuro-immuno-endocrinology. *Ann. N.Y. Acad. Sci. USA* 840: 498-509.
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7. Vonderhaar, B.K. 1998. Prolactin: the forgotten hormone of human breast cancer. *Pharmacol. Ther.* 79: 169-178.
8. 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.

CHROMOSOMAL LOCATION

Genetic locus: PRLR (human) mapping to 5p13.2; Prlr (mouse) mapping to 15 A1.

SOURCE

PRL-R (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of PRL-R of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-34516 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PRL-R (G-20) is recommended for detection of PRL-R of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

PRL-R (G-20) is also recommended for detection of PRL-R in additional species, including equine, canine and porcine.

Suitable for use as control antibody for PRL-R siRNA (h): sc-40167, PRL-R siRNA (m): sc-40168, PRL-R shRNA Plasmid (h): sc-40167-SH, PRL-R shRNA Plasmid (m): sc-40168-SH, PRL-R shRNA (h) Lentiviral Particles: sc-40167-V and PRL-R shRNA (m) Lentiviral Particles: sc-40168-V.

Molecular Weight of PRL-R: 100 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.



Try **PRL-R (D-7): sc-377098** or **PRL-R (B10): sc-74520**, our highly recommended monoclonal alternatives to PRL-R (G-20).