

# PRL-R (M-170): sc-30225

## 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 $\beta$ . 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

PRL-R (M-170) is a rabbit polyclonal antibody raised against amino acids 91-260 mapping within an extracellular domain of PRL-R of mouse origin.

## PRODUCT

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

## APPLICATIONS

PRL-R (M-170) is recommended for detection of PRL-R isoforms 1-3 of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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 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.

Positive Controls: mouse liver extract: sc-2256, mouse small intestine extract: sc-364252 or mouse kidney extract: sc-2255.

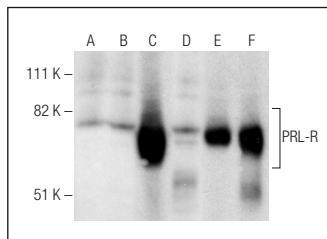
## STORAGE

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

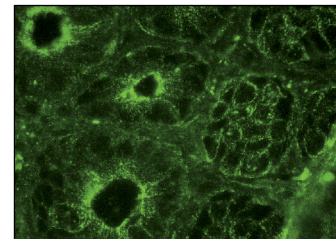
## RESEARCH USE

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

## DATA



PRL-R (M-170): sc-30225. Western blot analysis of PRL-R expression in 293T (A) and A-431 (B) whole cell lysates and mouse liver (C), mouse pancreas (D), mouse kidney (E) and mouse small intestine (F) tissue extracts.



PRL-R (M-170): sc-30225. Immunofluorescence staining of normal mouse intestine frozen section showing membrane staining.

## SELECT PRODUCT CITATIONS

- Kraidith, K., et al. 2009. Direct stimulation of the transcellular and paracellular calcium transport in the rat cecum by prolactin. *Pflugers Arch.* 458: 993-1005.
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- Xu, C., et al. 2012. Stromal-epithelial interactions modulate cross-talk between prolactin receptor and HER2/Neu in breast cancer. *Breast Cancer Res. Treat.* 134: 157-169.
- Seriwatanachai, D., et al. 2012. Chondroregulatory action of prolactin on proliferation and differentiation of mouse chondrogenic ATDC5 cells in 3-dimensional micromass cultures. *Biochem. Biophys. Res. Commun.* 420: 108-113.
- Dorkkam, N., et al. 2013. Prolactin stimulates the L-type calcium channel-mediated transepithelial calcium transport in the duodenum of male rats. *Am. J. Physiol. Cell Physiol.* 430: 711-716.

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Try **PRL-R (D-7): sc-377098** or **PRL-R (B10): sc-74520**, our highly recommended monoclonal alternatives to PRL-R (M-170).