SANTA CRUZ BIOTECHNOLOGY, INC.

Prolactin (H-12): sc-271773

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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

1. Goffin, V., et al. 1998. Prolactin: a hormone at the crossroads of neuro-immunoendocrinology. Ann. N.Y. Acad. Sci. 840: 498-509.
2. 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; Prl (mouse) mapping to 13 A3.1.

SOURCE

Prolactin (H-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 193-213 near the C-terminus of Prolactin of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Prolactin (H-12) is available conjugated to agarose (sc-271773 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-271773 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271773 PE), fluorescein (sc-271773 FITC), Alexa Fluor® 488 (sc-271773 AF488), Alexa Fluor® 546 (sc-271773 AF546), Alexa Fluor® 594 (sc-271773 AF594) or Alexa Fluor® 647 (sc-271773 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271773 AF680) or Alexa Fluor® 790 (sc-271773 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271773 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

Prolactin (H-12) is recommended for detection of Prolactin of mouse, rat and human 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).

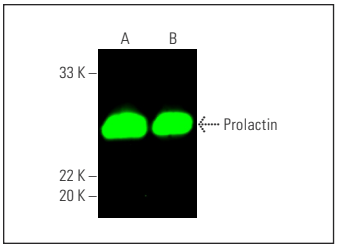
Prolactin (H-12) is also recommended for detection of Prolactin in additional species, including equine, canine and porcine.

Suitable for use as control antibody for Prolactin siRNA (h): sc-37214, Prolactin siRNA (m): sc-37215, Prolactin shRNA Plasmid (h): sc-37214-SH, Prolactin shRNA Plasmid (m): sc-37215-SH, Prolactin shRNA (h) Lentiviral Particles: sc-37214-V and Prolactin shRNA (m) Lentiviral Particles: sc-37215-V.

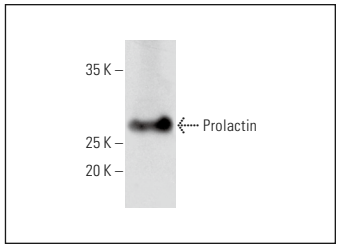
Molecular Weight of Prolactin: 27 kDa.

Positive Controls: BT-20 cell lysate: sc-2223, GH3 whole cell lysate: sc-364777 or mouse placenta extract: sc-364247.

DATA



Prolactin (H-12): sc-271773. Near-infrared western blot analysis of Prolactin expression in rat pituitary (**A**) and mouse placenta (**B**) tissue extracts. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.



Prolactin (H-12): sc-271773. Western blot analysis of Prolactin expression in GH3 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Li, X., et al. 2015. Psychological stress-derived Prolactin modulates Occludin expression in vaginal epithelial cells to compromise barrier function. Cell. Physiol. Biochem. 37: 153-161.
2. Rotondi, S., et al. 2016. Expression of peroxisome proliferator-activated receptor α (PPARα) in somatotropinomas: relationship with aryl hydro-carbon receptor interacting protein (AIP) and *in vitro* effects of fenofibrate in GH3 cells. Mol. Cell. Endocrinol. 426: 61-72.
3. Higashi, A.Y., et al. 2021. Claudin-9 constitutes tight junctions of folliculo-stellate cells in the anterior pituitary gland. Sci. Rep. 11: 21642.
4. Tani, N., et al. 2024. Effects of Prolactin on brain neurons under hypoxia. Life 14: 152.

RESEARCH USE

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