abcam

ab277137

Anti-Prolactin Receptor/PRL-R antibody [204] - BSA and Azide free

Recombinant

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Human PRLR aa 1-250. The exact immunogen used to generate this antibody is proprietary information. Database link P16471
Carrier free	Yes
Clone number	204
Purification technique	Affinity purification Protein A

Reactivity data

ICC

Tested

Species	Human
Dilution info	1/20 - 1/100
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1/25 - 1/100
Notes	-

Target data

See full target information PRLR

Function This is a receptor for the anterior pituitary hormone prolactin (PRL). Acts as a prosurvival factor for spermatozoa by inhibiting sperm capacitation through suppression of SRC kinase activation and stimulation of AKT. Isoform 4 is unable to transduce prolactin signaling. Isoform 6 is unable to transduce prolactin signaling.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary Prolactin receptor (PRL-R) also known as PRL receptor is a protein that binds prolactin a hormone essential for lactation and various other biological processes. PRL-R is a member of the type I cytokine receptor family and is located on cell surfaces. It has several isoforms including the full form and the delta 2772 variant. The receptor weighs approximately 80 kDa and is widely expressed in tissues such as the mammary gland liver and immune cells.

Biological function summary The prolactin receptor plays a significant role in regulating lactation reproductive and immunological functions. It binds prolactin to form a ligand-receptor complex initiating signal transduction pathways within cells. PRL-R is not part of a larger complex but instead activates intracellular signaling cascades leading to various cellular responses including growth and differentiation. This receptor is important for normal breast development and differentiation during pregnancy and lactation phases.

Pathways	PRL-R participates in the JAK2-STAT5 and PI3K-AKT pathways. These pathways are vital for mediating the biological effects of prolactin on cell division and survival. The JAK2-STAT5 pathway facilitates the transcription of genes involved in growth and proliferation while the PI3K-AKT pathway is important for metabolism and cell survival. PRL-R functionally interacts with proteins such as JAK2 which phosphorylates STAT5 propagating the signal initiated by receptor engagement.
Associated diseases and disorders	Prolactin receptor abnormalities can be tied to breast cancer and prolactinoma. Dysregulation of PRL-R through overexpression or mutations can lead to uncontrolled cell growth and contribute to cancer development particularly in breast tissue. Prolactinoma a pituitary gland tumor leads to excessive production of prolactin exacerbating PRL-R activity. In these contexts proteins like estrogen receptor in breast cancer and pituitary tumor transforming gene (PTTG) in prolactinoma may be intertwined with prolactin receptor-related disease processes.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

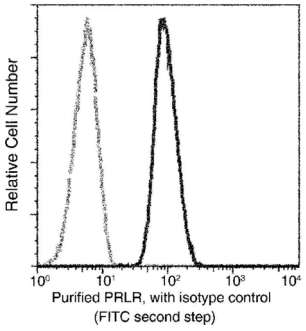
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

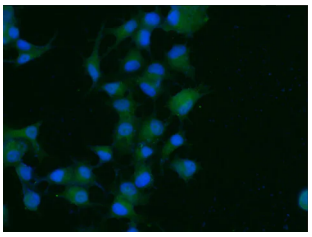
2 product images



Flow Cytometry - Anti-Prolactin Receptor/PRL-R antibody [204] - BSA and Azide free (ab277137)

Prolactin Receptor/PRL-R Flow Cytometry staining using rabbit Anti-Prolactin Receptor/PRL-R antibody

Flow cytometric analysis of Prolactin Receptor/PRL expression on MCF-7 (human breast adenocarcinoma cell line) cells. Cells were stained with ab277137 at 1/25 dilution, then a FITC-conjugated second step antibody (Black). Cells were also staibed with an isotype control (Grey). The histogram was derived from events with the forward and side light-scatter characteristics of intact cells.



Immunocytochemistry - Anti-Prolactin Receptor/PRL-R antibody [204] - BSA and Azide free (ab277137)

Prolactin Receptor/PRL-R Immunocytochemistry staining using rabbit Anti-Prolactin Receptor/PRL-R antibody

Immunofluorescence staining of Receptor/PRL-R in MCF-7 (human breast adenocarcinoma cell line) cells. Cells were fixed with 4% PFA, permeabilized with 0.3% Triton X-100 in PBS, blocked with 10% serum, and incubated with ab277137 at 1/60 dilution at 37°C for 1 hour. Then cells were stained with the Alexa Fluor® 488-conjugated goat Anti-rabbit IgG secondary antibody (green) and counterstained with DAPI (blue).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.