

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Mouse/Rat                                                                                                                                                                                                                                                                   |
| <b>Specificity</b>        | Detects mouse and rat Prolactin in Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human Prolactin is observed.                                                                                                                     |
| <b>Source</b>             | Monoclonal Rat IgG <sub>2B</sub> Clone # 207518                                                                                                                                                                                                                             |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant                                                                                                                                                                                                                  |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant mouse Prolactin<br>Leu32-Cys228<br>Accession # CAA28018                                                                                                                                                                                 |
| <b>Conjugate</b>          | Alexa Fluor 647<br>Excitation Wavelength: 650 nm<br>Emission Wavelength: 668 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

**Western Blot** Optimal dilution of this antibody should be experimentally determined.

## PREPARATION AND STORAGE

**Shipping** The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage** Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

## BACKGROUND

Prolactin (PRL) is a neuroendocrine pituitary hormone. Prolactin is synthesized by the anterior pituitary, placenta, brain, uterus, dermal fibroblasts, decidua, B cells, T cells, NK cells and breast cancer cells. Originally characterized as a lactogenic hormone, further studies have demonstrated broader roles in breast cancer development, regulation of reproductive function, and immunoregulation. In the immune system, Prolactin has been shown to be secreted by human PBMC and to act as a proliferative growth factor. Additionally, Prolactin treatment of human PBMC has been shown to enhance IFN-γ production. In the breast, Prolactin-induced morphogenesis of the mammary cells is mediated through IGF-2, which in turn upregulates cyclin D1. Prolactin has several molecular forms. The predominant form is a monomer; the non-glycosylated form is 23 kDa and the glycosylated form is 25 kDa. Glycosylated Prolactin is removed from the circulation faster and has been reported to have lower biological potency. Mouse Prolactin cDNA encodes a 228 amino acid (aa) residue protein with a putative 31 aa residue signal peptide. The Prolactin receptor is a transmembrane type I glycoprotein that belongs to the cytokine hematopoietic receptor family. B cells, T cells, macrophages, NK cells, monocytes, CD34<sup>+</sup> progenitor cells, neutrophils, mammary gland, liver, kidney, adrenals, ovaries, testis, prostate, seminal vesicles, and hypothalamus have all been shown to express the Prolactin receptor. Three forms of the receptor, generated by differential splicing, have been identified at 14, 16, and 22 kDa. These isoforms differ in the length of their cytoplasmic domains. It is believed that the short cytoplasmic form is non-functional. Prolactin signal transduction involves the JAK/STAT families and Src kinase family (1-9).

## PRODUCT SPECIFIC NOTICES

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