

DESCRIPTION

Species Reactivity	Human
Specificity	Detects rhProlactin in Direct ELISA
Source	Monoclonal Mouse IgG ₁ Clone # 1085531
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived human Prolactin Leu29-Cys227 Accession # P01236
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide
*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.
Immunohistochemistry	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 (gene name PRL) is a secreted neuroendocrine pituitary hormone that acts primarily on the mammary gland to promote lactation, but has pleiotropic effects in both males and females (1-6). Prolactin is predominantly found as 199 amino acid, 25 kDa glycosylated and 23 kDa non-glycosylated monomers (6). Human prolactin shares only 60% and 63% amino acid sequence identity with mouse and rat prolactin, respectively, although rat prolactin can activate the human prolactin receptor (3). Post-translational modifications such as polymerization, complex formation with IgG (in humans), glycosylation, and proteolytic cleavage can alter the activities of prolactin (6-8). Non-glycosylated prolactin is produced by the pituitary and packaged in storage granules before secretion, while glycosylated prolactin is reported to be constitutively secreted, have lower biological potency, and be removed from the circulation more quickly (3, 6, 7). Cleavage by matrix metalloproteinases or Cathepsin D can produce N-terminal 16 kDa antiangiogenic fragments also called vasoinhibins (9, 10). Thrombin can produce C-terminal 16 kDa fragments that are not antiangiogenic (3). Prolactin is synthesized mainly by the anterior pituitary in all mammals, where secretion is under tonic inhibition by hypothalamic dopamine (2, 3). In humans, prolactin is also produced peripherally (2-5). Prolactin expression is low during early human pregnancy, but increases in late pregnancy (2, 3). The prolactin receptor (gene name PRLR) is a transmembrane type I glycoprotein that belongs to the cytokine hematopoietic receptor family. Expression of the prolactin receptor is widespread (2-5). Each prolactin molecule is thought to bind two receptor molecules (11). In addition to its lactogenic activity, peripherally produced prolactin plays roles in breast and prostate cancer development, regulation of reproductive function, and immunoregulation (5, 6).

PRODUCT SPECIFIC NOTICES

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