

Prolactin Receptor (D4A9) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IHC-P	H	Endogenous	95, 65	Rabbit IgG	#P16471	5618

Product Usage Information**Application**

Western Blotting
Immunohistochemistry (Paraffin)

Dilution

1:1000
1:400

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Prolactin Receptor (D4A9) Rabbit mAb recognizes endogenous levels of total prolactin receptor protein. This antibody detects both long (90 kDa) and short (65 kDa) isoforms of the prolactin receptor.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Asp518 of human prolactin receptor protein.

Background

Prolactin receptor (PRLR) is a single-pass transmembrane receptor that mediates the actions of prolactin, a peptide hormone secreted by the anterior pituitary. PRLR is a type 1 cytokine receptor that is best known for promoting lactation in mammals, but which is also implicated in osmoregulation, metabolism, and immune system function (1). Research studies suggest that PRLR activation may promote tumor growth (2). Prolactin signaling via PRLR can activate multiple signal transduction pathways in breast cancer cells, including the Jak/Stat, PI3K/Akt, and MAPK pathways, leading to both pro-proliferative and anti-apoptotic downstream effects (3,4). Nine isoforms of PRLR have been identified, with the canonical (long) isoform primarily responsible for the pro-oncogenic effects of PRLR in some cancer cell lines (3). Much less is known about the functions of the other prolactin receptor isoforms. Defining the precise role of PRLR in promoting growth of breast cancer and other tumor types remains an area of active investigation (2).

Background References

1. Ignacak, A. et al. (2012) *J Physiol Pharmacol* 63, 435-43.
2. Damiano, J.S. and Wasserman, E. (2013) *Clin Cancer Res* 19, 1644-50.
3. Galsgaard, E.D. et al. (2009) *J Endocrinol* 201, 115-28.
4. Aksamitene, E. et al. (2011) *Cell Signal* 23, 1794-805.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween@ 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IHC-P:** Immunohistochemistry (Paraffin)

Cross-Reactivity Key

H: Human

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