For Research Use Only. Not For Use In Diagnostic Procedures.

**Prolactin Receptor (D4A9) Rabbit mAb**

100 µl (10 western blots)

**Applications**

- W—Western
- IHC—Immunohistochemistry
- ChIP—Chromatin Immunoprecipitation
- IP—Immunoprecipitation

**Species Cross-Reactivity**

HUMAN, BOVINE, CHICKEN, MINK, XIILENFISH

**Molecular Wt.**

95, 65 kDa

**Isotype**

Rabbit IgG

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**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. 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. 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).

**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. Immunizing animals with a synthetic peptide corresponding to residues surrounding Asp518 of human prolactin receptor

**Recommended Antibody Dilutions:**

Western blotting 1:1000
Immunohistochemistry (Paraffin) 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.

**Species cross-reactivity is determined by western blot.**

**Anti-rabbit secondary antibodies must be used to detect this antibody.**

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**For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com**

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**Western blot analysis of extracts from various cell lines using Prolactin Receptor (D4A9) Rabbit mAb (upper) and β-Actin (D6A8) Rabbit mAb #8457 (lower).**

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**Immunohistochemical analysis of paraffin-embedded T-47D (left) and MDA-MB-231 (right) cell pellets using Prolactin Receptor (D4A9) Rabbit mAb.**

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

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**Applications:**

- Western
- IHC—Immunohistochemistry
- ChIP—Chromatin Immunoprecipitation
- IP—Immunoprecipitation
- Flow cytometry
- ELISA-Peptide

**Species Cross-Reactivity:**

- H—human
- M—mouse
- R—rat
- X—Xenopus
- C—zebrafish
- S—C. elegans
- M—mouse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.
Immunohistochemical analysis of paraffin-embedded human placenta using Prolactin Receptor (D4A9) Rabbit mAb in the presence of control peptide (left) or antigen-specific peptide (right). Note the staining observed in placental decidual cells.

Background References: