

# PLU-1 (P-18): sc-31613

## BACKGROUND

PLU-1 is a large (1,544 amino acid) nuclear protein that interacts with brain factor-1 (BF-1) and paired box 9 (PAX9), both of which are developmental transcription factors. PLU-1 belongs to the testis-cancer antigen group of proteins and is a member of the ARID family of DNA binding proteins. It is a multi-domain protein with strong transcriptional repression properties. PLU-1 shows restricted expression in adult tissues, with high expression in testis and transient expression in the pregnant mammary gland. Both the PLU-1 gene and the PLU-1 protein product are specifically upregulated in breast cancer. PLU-1 may be important in meiotic transcription because of its apparent association with chromatin.

## REFERENCES

- Lu, P.J., et al. 1999. A novel gene (PLU-1) containing highly conserved putative DNA/chromatin binding motifs is specifically upregulated in breast cancer. *J. Biol. Chem.* 274: 15633-15645.
- Madsen, B., et al. 2002. Characterisation and developmental expression of mouse PLU-1, a homologue of a human nuclear protein (PLU-1) which is specifically upregulated in breast cancer. *Mech. Dev.* 119S:239-246.
- Tan, K., et al. 2003. Human PLU-1 has transcriptional repression properties and interacts with the developmental transcription factors BF-1 and PAX9. *J. Biol. Chem.* 278: 20507-20513.
- Madsen, B., et al. 2003. PLU-1, a transcriptional repressor and putative testis-cancer antigen, has a specific expression and localisation pattern during meiosis. *Chromosoma* 112: 124-132.
- Catteau, A., et al. 2004. A short region of the promoter of the breast cancer associated PLU-1 gene can regulate transcription *in vitro* and *in vivo*. *Int. J. Oncol.* 25: 5-16.

## CHROMOSOMAL LOCATION

Genetic locus: KDM5B (human) mapping to 1q32.1; Kdm5b (mouse) mapping to 1 E4.

## SOURCE

PLU-1 (P-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PLU-1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-31613 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-31613 X, 200 µg/0.1 ml.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

PLU-1 (P-18) is recommended for detection of PLU-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PLU-1 (P-18) is also recommended for detection of PLU-1 in additional species, including equine and bovine.

Suitable for use as control antibody for PLU-1 siRNA (h): sc-44522, PLU-1 siRNA (m): sc-44523, PLU-1 shRNA Plasmid (h): sc-44522-SH, PLU-1 shRNA Plasmid (m): sc-44523-SH, PLU-1 shRNA (h) Lentiviral Particles: sc-44522-V and PLU-1 shRNA (m) Lentiviral Particles: sc-44523-V.

PLU-1 (P-18) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.


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Try **PLU-1 (JARIA3D4): sc-81358**, our highly recommended monoclonal alternative to PLU-1 (P-18).