

# PLU-1 (JARIA3D4): sc-81358

## BACKGROUND

PLU-1 is a large (1,544 amino acids) nuclear protein that interacts with brain factor-1 (BF-1) and paired box 9 (Pax-9), 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 transiently 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

1. 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.
2. 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.* 119: S239-S246.
3. 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.
4. 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.
5. 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: JARID1B (human) mapping to 1q32.1.

## SOURCE

PLU-1 (JARIA3D4) is a mouse monoclonal antibody raised against a recombinant protein corresponding to the C-terminal region of PLU-1 of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

## STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

## RESEARCH USE

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

## APPLICATIONS

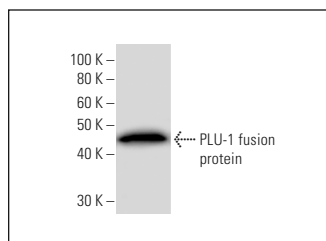
PLU-1 (JARIA3D4) is recommended for detection of PLU-1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

## DATA



PLU-1 (JARIA3D4): sc-81358. Western Blot analysis of human recombinant PLU-1 fusion protein.

## PROTOCOLS

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