

# PRMT2 (N-19): sc-55002

## BACKGROUND

PRMT2 (protein arginine N-methyltransferase 2) is a 433 amino acid protein encoded by the human gene PRMT2. PRMT2 belongs to the protein arginine N-methyltransferase family and contains one SH3 domain. The primary function of protein methyltransferases is the posttranslational methylation of arginine residues. The PRMT family of proteins contains related putative methyltransferase domains that modify chromatin and regulate cellular transcription. Some family members, PRMT1 and PRMT4, show transcriptional modulation and intracellular signaling. Through a highly conserved S-adenosylmethionine-binding domain, PRMT2 inhibits NFκB-dependent transcription and promotes apoptosis. PRMT2 has this effect by blocking nuclear export of IκBα through a leptomycin-sensitive pathway, which increases nuclear IκBα and decreases NFκB DNA binding. PRMT2 also renders cells susceptible to apoptosis by cytokines or cytotoxic drugs.

## REFERENCES

1. Qi, C., Chang, J., Zhu, Y., Yeldandi, A.V., Rao, S.M. and Zhu, Y.J. 2002. Identification of protein arginine methyltransferase 2 as a co-activator for estrogen receptor α. *J. Biol. Chem.* 277: 28624-28630.
2. Ganesh, L., Yoshimoto, T., Moorthy, N.C., Akahata, W., Boehm, M., Nabel, E.G. and Nabel, G.J. 2006. Protein methyltransferase 2 inhibits NFκB function and promotes apoptosis. *Mol. Cell. Biol.* 26: 3864-3874.
3. Yildirim, A.O., Bulau, P., Zakrzewicz, D., Kitowska, K.E., Weissmann, N., Grimminger, F., Morty, R.E. and Eickelberg, O. 2006. Increased protein arginine methylation in chronic hypoxia: role of protein arginine methyltransferases. *Am. J. Respir. Cell Mol. Biol.* 35: 436-443.
4. Dong, C.W., Zhang, Y.B., Lu, A.J., Zhu, R., Zhang, F.T., Zhang, Q.Y. and Gui, J.F. 2006. Molecular characterisation and inductive expression of a fish protein arginine methyltransferase 1 gene in response to virus infection. *Fish Shellfish Immunol.* 22: 380-393.
5. McGraw, S., Vigneault, C. and Sirard, M.A. 2007. Temporal expression of factors involved in chromatin remodeling and in gene regulation during early bovine *in vitro* embryo development. *Reproduction* 133: 597-608.
6. Meyer, R., Wolf, S.S. and Obendorf, M. 2007. PRMT2, a member of the protein arginine methyltransferase family, is a co-activator of the androgen receptor. *J. Steroid Biochem. Mol. Biol.* 107: 1-14.
7. Besson, V., Brault, V., Duchon, A., Togbe, D., Bizot, J.C., Quesniaux, V.F., Ryffel, B. and Héroult, Y. 2007. Modeling the monosomy for the telomeric part of human chromosome 21 reveals haploinsufficient genes modulating the inflammatory and airway responses. *Hum. Mol. Genet.* 16: 2040-2052.

## CHROMOSOMAL LOCATION

Genetic locus: PRMT2 (human) mapping to 21q22.3.

## SOURCE

PRMT2 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of PRMT2 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-55002 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PRMT2 (N-19) is recommended for detection of PRMT2 of 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).

Suitable for use as control antibody for PRMT2 siRNA (h): sc-62860, PRMT2 shRNA Plasmid (h): sc-62860-SH and PRMT2 shRNA (h) Lentiviral Particles: sc-62860-V.

Molecular Weight of PRMT2: 55 kDa.

## 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.

## STORAGE

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

## 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 **PRMT2 (B-11): sc-393254** or **PRMT2 (E-12): sc-390089**, our highly recommended monoclonal alternatives to PRMT2 (N-19).