



# PCGF1 (Y-18): sc-109393

## BACKGROUND

Polycomb group (PCG) proteins form multiprotein complexes that regulate expression patterns of developmental and cell proliferation genes. Several PCG proteins contain ring finger domains and have been identified as a subclass of RING finger proteins. The RING-type zinc finger motif is present in a number of viral and eukaryotic proteins and is made of a conserved cysteine-rich domain that is able to bind two zinc atoms. Proteins that contain the RING-type zinc finger conserved domain are generally involved in the ubiquitination pathway of protein degradation. PCGF1 (polycomb group ring finger 1), also known as NSPC1, RNF68 or RNF3A-2, is a 259 amino acid nuclear protein that is ubiquitously expressed. PCGF1 is a component of the PCG multiprotein BCoR complex, a complex required to maintain the transcriptionally repressive state of some genes, such as Bcl-6 and the cyclin-dependent kinase inhibitor, p21. PCGF1 promotes cell cycle progression and enhances cell proliferation.

## REFERENCES

1. Kanno, M., et al. 1995. Mel-18, a Polycomb group-related mammalian gene, encodes a transcriptional negative regulator with tumor suppressive activity. *EMBO J.* 14: 5672-5678.
2. Nunes, M., et al. 2001. NSPc1, a novel mammalian Polycomb gene, is expressed in neural crest-derived structures of the peripheral nervous system. *Mech. Dev.* 102: 219-222.
3. Gong, Y., et al. 2005. NSPc1, a mainly nuclear localized protein of novel PCG family members, has a transcription repression activity related to its PKC phosphorylation site at S183. *FEBS Lett.* 579: 115-121.
4. Gearhart, M.D., et al. 2006. Polycomb group and SCF ubiquitin ligases are found in a novel BCoR complex that is recruited to Bcl-6 targets. *Mol. Cell Biol.* 26: 6880-6889.
5. Gong, Y., et al. 2006. NSPc1 is a cell growth regulator that acts as a transcriptional repressor of p21Waf1/Cip1 via the RARE element. *Nucleic Acids Res.* 34: 6158-6169.
6. Sánchez, C., et al. 2007. Proteomics analysis of RING1B/RNF2 interactors identifies a novel complex with the FBXL10/JHDM1B histone demethylase and the Bcl-6 interacting corepressor. *Mol. Cell Proteomics* 6: 820-834.
7. Wu, X., et al. 2008. Cooperation between EZH2, NSPc1-mediated histone H2A ubiquitination and Dnmt1 in HOX gene silencing. *Nucleic Acids Res.* 36: 3590-3599.

## CHROMOSOMAL LOCATION

Genetic locus: PCGF1 (human) mapping to 2p13.1; Pcgf1 (mouse) mapping to 6 C3.

## 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.

## SOURCE

PCGF1 (Y-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PCGF1 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-109393 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PCGF1 (Y-18) is recommended for detection of PCGF1 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); non cross-reactive with family members PCGF3, PCGF5 or PCGF6.

Suitable for use as control antibody for PCGF1 siRNA (h): sc-94353, PCGF1 siRNA (m): sc-152107, PCGF1 shRNA Plasmid (h): sc-94353-SH, PCGF1 shRNA Plasmid (m): sc-152107-SH, PCGF1 shRNA (h) Lentiviral Particles: sc-94353-V and PCGF1 shRNA (m) Lentiviral Particles: sc-152107-V.

Molecular Weight of PCGF1: 30 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.

## PROTOCOLS

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