

PCGF1 (S-14): sc-109391

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.

SOURCE

PCGF1 (S-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PCGF1 of human origin.

STORAGE

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

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-109391 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PCGF1 (S-14) is recommended for detection of PCGF1 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); non cross-reactive with family members PCGF3, PCGF5 or PCGF6.

PCGF1 (S-14) is also recommended for detection of PCGF1 in additional species, including equine, canine and bovine.

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.