# CCPG1 (S-14): sc-138196



The Power to Question

# **BACKGROUND**

CCPG1 (cell cycle progression 1), also known as CPR8, is a 757 amino acid single-pass type II membrane protein that acts as an assembly platform for Rho protein signaling complexes. Involved in cell cycle regulation, CCPG1 limits guanine nucleotide exchange activity of Dbs, a Rho-specific guanine nucleotide exchange factor, toward Rho A, which results in an inhibition of both its transcriptional activation ability and its transforming activity. Considered a novel scaffold protein, CCPG1 exists as four isoforms produced by alternative splicing events. The gene encoding CCPG1 maps to human chromosome 15, which houses over 700 genes and comprises nearly 3% of the human genome. Angelman syndrome, Prader-Willi syndrome, Tay-Sachs disease and Marfan syndrome are all associated with defects in chromosome 15-localized genes.

# **REFERENCES**

- 1. Edwards, M.C., Liegeois, N., Horecka, J., DePinho, R.A., Sprague, G.F., Tyers, M. and Elledge, S.J. 1997. Human CPR (cell cycle progression restoration) genes impart a Far-phenotype on yeast cells. Genetics 147: 1063-1076.
- Zheng, Y. 2001. Dbl family guanine nucleotide exchange factors. Trends Biochem. Sci. 26: 724-732.
- Cheng, L., Rossman, K.L., Mahon, G.M., Worthylake, D.K., Korus, M., Sondek, J. and Whitehead, I.P. 2002. RhoGEF specificity mutants implicate Rho A as a target for Dbs transforming activity. Mol. Cell. Biol. 22: 6895-6905.
- 4. Rossman, K.L. and Sondek, J. 2005. Larger than Dbl: new structural insights into Rho A activation. Trends Biochem. Sci. 30: 163-165.
- Kostenko, E.V., Olabisi, O.O., Sahay, S., Rodriguez, P.L. and Whitehead, I.P. 2006. CCPG1, a novel scaffold protein that regulates the activity of the Rho guanine nucleotide exchange factor Dbs. Mol. Cell. Biol. 26: 8964-8975.
- Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 606654. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Ronchetti, D., Lionetti, M., Mosca, L., Agnelli, L., Andronache, A., Fabris, S., Deliliers, G.L. and Neri, A. 2008. An integrative genomic approach reveals coordinated expression of intronic miR-335, miR-342, and miR-561 with deregulated host genes in multiple myeloma. BMC Med. Genomics 1: 37.

# CHROMOSOMAL LOCATION

Genetic locus: CCPG1 (human) mapping to 15q21.3.

### SOURCE

CCPG1 (S-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of CCPG1 of human origin.

# **PRODUCT**

Each vial contains 200  $\mu g$  lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-138196 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

#### **APPLICATIONS**

CCPG1 (S-14) is recommended for detection of CCPG1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], 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 CCPG1 siRNA (h): sc-90150, CCPG1 shRNA Plasmid (h): sc-90150-SH and CCPG1 shRNA (h) Lentiviral Particles: sc-90150-V.

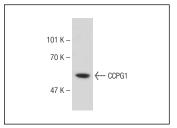
Molecular Weight of CCPG1 isoforms: 87/72/68/49 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

# **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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

# DATA



CCPG1 (S-14): sc-138196. Western blot analysis of CCPG1 expression in Hep G2 whole cell lysate.

# **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 or our catalog for detailed protocols and support products.