

# PLEKHG2 (N-13): sc-162021

## BACKGROUND

PLEKHG2 (pleckstrin homology domain containing, family G (with RhoGef domain) member 2), also known as CLG (common-site lymphoma/leukemia guanine nucleotide exchange factor) or FLJ00018, is a 1,386 amino acid protein containing a single DH (DBL-homology) domain and a PH domain. Existing as three alternatively spliced isoforms, PLEKHG2 may be a transforming oncogene with exchange activity for Cdc42. PLEKHG2 is activated by binding to the  $\beta$  and  $\gamma$  subunits of the heterotrimeric guanine nucleotide-binding protein (G protein) and acts a guanine-nucleotide exchange factor (GEF) for Rac 1 and Cdc42. The gene encoding PLEKHG2 maps to human chromosome 19, which consists of over 63 million bases, houses approximately 1,400 genes and is recognized for having the greatest gene density of the human chromosomes.

## REFERENCES

1. Dowler, S., et al. 2000. Identification of pleckstrin-homology-domain-containing proteins with novel phosphoinositide-binding specificities. *Biochem. J.* 351: 19-31.
2. Himmel, K.L., et al. 2002. Activation of clg, a novel dbl family guanine nucleotide exchange factor gene, by proviral insertion at evi24, a common integration site in B cell and myeloid leukemias. *J. Biol. Chem.* 277: 13463-13472.
3. Niu, J., et al. 2003. G Protein  $\beta\gamma$  subunits stimulate p114RhoGEF, a guanine nucleotide exchange factor for Rho A and Rac 1: regulation of cell shape and reactive oxygen species production. *Circ. Res.* 93: 848-856.
4. Siderovski, D.P. and Willard, F.S. 2005. The GAPs, GEFs, and GDIs of heterotrimeric G protein  $\alpha$  subunits. *Int. J. Biol. Sci.* 1: 51-66.
5. Ueda, H., et al. 2008. Heterotrimeric G protein  $\beta\gamma$  subunits stimulate FLJ00018, a guanine nucleotide exchange factor for Rac 1 and Cdc42. *J. Biol. Chem.* 283: 1946-1953.
6. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 611893. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: PLEKHG2 (human) mapping to 19q13.2; Plekhg2 (mouse) mapping to 7 A3.

## SOURCE

PLEKHG2 (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PLEKHG2 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.

## RESEARCH USE

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

## PRODUCT

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

Blocking peptide available for competition studies, sc-162021 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PLEKHG2 (N-13) is recommended for detection of PLEKHG2 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 other PLEKHG family members.

PLEKHG2 (N-13) is also recommended for detection of PLEKHG2 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for PLEKHG2 siRNA (h): sc-97423, PLEKHG2 siRNA (m): sc-152312, PLEKHG2 shRNA Plasmid (h): sc-97423-SH, PLEKHG2 shRNA Plasmid (m): sc-152312-SH, PLEKHG2 shRNA (h) Lentiviral Particles: sc-97423-V and PLEKHG2 shRNA (m) Lentiviral Particles: sc-152312-V.

Molecular Weight of PLEKHG2: 139 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> 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.