SANTA CRUZ BIOTECHNOLOGY, INC.

# PERLD1 (N-13): sc-161154

## BACKGROUND

Glycosylphoshatidylinositol (GPI) anchors are remodeled during their transport to the cell surface. The GPI lipid remodeling pathway is conserved from yeast to mammalians. PERLD1 (PER1-like domain-containing protein 1), also known as CAB2, PER1, PP1498, AGLA546 or PGAP3 (post-GPI attachment to proteins factor 3), is a 320 amino acid multi-pass membrane protein that localizes to the Golgi apparatus and the endoplasmic reticulum. Ubiquitously expressed with highest levels found in thyroid and placenta, PERLD1 belongs to the PGAP3 family and participates in the lipid remodeling step of GPI-anchor maturation. Lipid remodeling involves the generation of two saturated fatty chains at the sn-2 position of GPI-anchors proteins. PERLD1 is essential for phospholipase A2 activity that removes an acyl-chain at the sn-2 position of GPI-anchors during GPI remodeling.

## REFERENCES


1. Katoh, M. and Katoh, M. 2004. Evolutionary recombination hotspot around GSDML-GSDM locus is closely linked to the oncogenomic recombination hotspot around the PPP1R1B-ERBB2-GRB7 amplicon. Int. J. Oncol. 24: 757-763.
2. Sangiorgio, V., et al. 2004. GPI-anchored proteins and lipid rafts. Ital. J. Biochem. 53: 98-111.
3. Fujita, M., et al. 2006. PER1 is required for GPI-phospholipase A2 activity and involved in lipid remodeling of GPI-anchored proteins. Mol. Biol. Cell 17: 5253-5264.
4. Maeda, Y., et al. 2007. Fatty acid remodeling of GPI-anchored proteins is required for their raft association. Mol. Biol. Cell 18: 1497-1506.
5. Fujita, M. and Jigami, Y. 2008. Lipid remodeling of GPI-anchored proteins and its function. Biochim. Biophys. Acta 1780: 410-420.
6. Jigami, Y. 2008. Biosynthetic pathway of GPI-anchored cell wall mannoproteins in yeast as a potential target for anti-fungal and anti-cancer drugs. Nihon Ishinkin Gakkai Zasshi 49: 253-262.


## CHROMOSOMAL LOCATION

Genetic locus: PGAP3 (human) mapping to 17q12; Pgap3 (mouse) mapping to 11 D.

## SOURCE

PERLD1 (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PERLD1 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-161154 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

PERLD1 (N-13) is recommended for detection of PERLD1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

PERLD1 (N-13) is also recommended for detection of PERLD1 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for PERLD1 siRNA (h): sc-93635, PERLD1 siRNA (m): sc-152170, PERLD1 shRNA Plasmid (h): sc-93635-SH, PERLD1 shRNA Plasmid (m): sc-152170-SH, PERLD1 shRNA (h) Lentiviral Particles: sc-93635-V and PERLD1 shRNA (m) Lentiviral Particles: sc-152170-V.

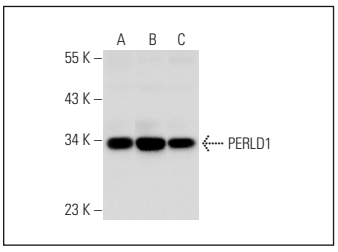
Molecular Weight of PERLD1: 36 kDa.

Positive Controls: THP-1 cell lysate: sc-2238, Jurkat whole cell lysate: sc-2204 or K-562 whole cell lysate: sc-2203.

## 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




PERLD1 (N-13): sc-161154. Western blot analysis of PERLD1 expression in THP-1 (**A**), Jurkat (**B**) and K-562 (**C**) whole cell lysates.

## 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.