

## PPT2 (D-14): sc-169020

### BACKGROUND

PPT2 (palmitoyl-protein thioesterase 2), also known as G14, is a 302 amino acid glycosylated protein that localizes to the lysosome and belongs to the palmitoyl-protein thioesterase family. Expressed throughout the body with highest levels in skeletal muscle, PPT2 functions to remove thioester-linked fatty acyl groups from a variety of substrates, including S-palmitoyl-CoA, thereby playing an important role in lipid metabolism. PPT2 operates at an optimal pH of 7 and exhibits the highest activity for the acyl groups on myristic and palmitic acids, with lower levels of activity toward other short- and long-chain acyl substrates, PPT2 exists as two isoforms, one of which is expressed at low levels and is catalytically inactive.

### REFERENCES

1. Soyombo, A.A. and Hofmann, S.L. 1997. Molecular cloning and expression of palmitoyl-protein thioesterase 2 (PPT2), a homolog of lysosomal palmitoyl-protein thioesterase with a distinct substrate specificity. *J. Biol. Chem.* 272: 27456-27463.
2. Aguado, B. and Campbell, R.D. 1999. Characterization of a human MHC class III region gene product with S-thioesterase activity. *Biochem. J.* 341: 679-689.
3. Soyombo, A.A., Yi, W. and Hofmann, S.L. 1999. Structure of the human palmitoyl-protein thioesterase-2 gene (PPT2) in the major histocompatibility complex on chromosome 6p21.3. *Genomics* 56: 208-216.
4. Gupta, P., Soyombo, A.A., Atashband, A., Wisniewski, K.E., Shelton, J.M., Richardson, J.A., Hammer, R.E. and Hofmann, S.L. 2001. Disruption of PPT1 or PPT2 causes neuronal ceroid lipofuscinosis in knockout mice. *Proc. Natl. Acad. Sci. USA* 98: 13566-13571.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603298. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Calero, G., Gupta, P., Nonato, M.C., Tandel, S., Biehl, E.R., Hofmann, S.L. and Clardy, J. 2003. The crystal structure of palmitoyl protein thioesterase-2 (PPT2) reveals the basis for divergent substrate specificities of the two lysosomal thioesterases, PPT1 and PPT2. *J. Biol. Chem.* 278: 37957-37964.
7. Gupta, P., Soyombo, A.A., Shelton, J.M., Wilkofsky, I.G., Wisniewski, K.E., Richardson, J.A. and Hofmann, S.L. 2003. Disruption of PPT2 in mice causes an unusual lysosomal storage disorder with neurovisceral features. *Proc. Natl. Acad. Sci. USA* 100: 12325-12330.

### CHROMOSOMAL LOCATION

Genetic locus: PPT2 (human) mapping to 6p21.32; Ppt2 (mouse) mapping to 17 B1.

### SOURCE

PPT2 (D-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PPT2 of human origin.

### RESEARCH USE

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

### 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-169020 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

PPT2 (D-14) is recommended for detection of PPT2 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).

PPT2 (D-14) is also recommended for detection of PPT2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PPT2 siRNA (h): sc-95460, PPT2 siRNA (m): sc-152428, PPT2 shRNA Plasmid (h): sc-95460-SH, PPT2 shRNA Plasmid (m): sc-152428-SH, PPT2 shRNA (h) Lentiviral Particles: sc-95460-V and PPT2 shRNA (m) Lentiviral Particles: sc-152428-V.

Molecular Weight of PPT2: 34 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) 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.

### STORAGE

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

### PROTOCOLS

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