

# PWP2 (D-20): sc-83743

## BACKGROUND

PWP2 (periodic tryptophan protein 2), also known as EHOc-17, is a 919 amino acid protein that is the human homolog of the *Saccharomyces cerevisiae* periodic Trp 2 protein. Belonging to the WD repeat PWP2 family of proteins, PWP2 contains 14 WD repeats and has over 40% identity to the yeast homolog. PWP2 is localized to the nucleus and is implicated to play a role in early G<sub>1</sub> phase of the cell cycle. Essential for cell viability, PWP2 is also thought to be a candidate for various genetic disorders, such as progressive myoclonus epilepsy (EPM1), autoimmune polyglandular disease (APECED) and holoprosencephaly-1 (HPE1). The PWP2 gene maps to chromosome 21q22.3.

## REFERENCES

1. Yamakawa, K., Gao, D.Q. and Korenberg, J.R. 1996. A periodic tryptophan protein 2 gene homologue (PWP2H) in the candidate region of progressive myoclonus epilepsy on 21q22.3. *Cytogenet. Cell Genet.* 74: 140-145.
2. Lafrenière, R.G., Rochefort, D.L., Chrétien, N., Neville, C.E., Korneluk, R.G., Zuo, L., Wei, Y., Lichter, J. and Rouleau, G.A. 1996. Isolation and genomic structure of a human homolog of the yeast periodic tryptophan protein 2 (PWP2) gene mapping to 21q22.3. *Genome Res.* 6: 1216-1226.
3. Lalioti, M.D., Chen, H., Rossier, C., Shafaatian, R., Antonarakis, S.E. and Reid, J.D. 1996. Cloning the cDNA of human PWP2, which encodes a protein with WD repeats and maps to 21q22.3. *Genomics* 35: 321-327.
4. Shafaatian, R., Payton, M.A. and Reid, J.D. 1996. PWP2, a member of the WD-repeat family of proteins, is an essential *Saccharomyces cerevisiae* gene involved in cell separation. *Mol. Gen. Genet.* 252: 101-114.
5. Nagamine, K., Kudoh, J., Minoshima, S., Kawasaki, K., Asakawa, S., Ito, F. and Shimizu, N. 1997. Genomic organization and complete nucleotide sequence of the human PWP2 gene on chromosome 21. *Genomics* 42: 528-531.
6. Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 601475. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
7. Dosil, M. and Bustelo, X.R. 2004. Functional characterization of PWP2, a WD family protein essential for the assembly of the 90 S pre-ribosomal particle. *J. Biol. Chem.* 279: 37385-37397.
8. Bernstein, K.A., Bleichert, F., Bean, J.M., Cross, F.R. and Baserga, S.J. 2007. Ribosome biogenesis is sensed at the start cell cycle checkpoint. *Mol. Biol. Cell* 18: 953-964.

## CHROMOSOMAL LOCATION

Genetic locus: PWP2 (human) mapping to 21q22.3; Pwp2 (mouse) mapping to 10 C1.

## SOURCE

PWP2 (D-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of PWP2 of human origin.

## RESEARCH USE

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

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-83743 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PWP2 (D-20) is recommended for detection of PWP2 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 PWP family members.

PWP2 (D-20) is also recommended for detection of PWP2 in additional species, including bovine and porcine.

Suitable for use as control antibody for PWP2 siRNA (h): sc-91396, PWP2 siRNA (m): sc-152598, PWP2 shRNA Plasmid (h): sc-91396-SH, PWP2 shRNA Plasmid (m): sc-152598-SH, PWP2 shRNA (h) Lentiviral Particles: sc-91396-V and PWP2 shRNA (m) Lentiviral Particles: sc-152598-V.

Molecular Weight of PWP2: 102 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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.