

PPWD1 (E-15): sc-165279

BACKGROUND

PPWD1 (peptidylprolyl isomerase domain and WD repeat containing 1), also known as spliceosome-associated cyclophilin, is a 646 amino acid protein that belongs to the cyclophilin-type PPlase family and the PPIL1 subfamily. PPWD1 is similar in structure to canonical CypA, as well as to CypH and PPIL1, two additional spliceosomal cyclophilins. PPWD1 contains one PPlase cyclophilin-type domain and four WD repeats. Localizing to nucleus, PPWD1 associates with spliceosomal complexes and operates as a subunit of the spliceosome C complex. Functioning as a putative peptidylprolyl isomerase, PPWD1 accelerates protein folding and catalyzes the *cis-trans* isomerization of proline imidic peptide bonds in oligopeptides. PPWD1 may also play a role in pre-mRNA splicing. Highly conserved, PPWD1 is encoded by a gene that maps to human chromosome 5q12.3.

REFERENCES

1. Davis, T.L., et al. 2008. The crystal structure of human WD40 repeat-containing peptidylprolyl isomerase (PPWD1). *FEBS J.* 275: 2283-2295.
2. Mesa, A., et al. 2008. Spliceosomal immunophilins. *FEBS Lett.* 582: 2345-2351.
3. Thai, V., et al. 2008. Structural, biochemical, and *in vivo* characterization of the first virally encoded cyclophilin from the Mimivirus. *J. Mol. Biol.* 378: 71-86.
4. Bessonov, S., et al. 2008. Isolation of an active step I spliceosome and composition of its RNP core. *Nature* 452: 846-850.
5. Kanlaya, R., et al. 2010. Vimentin interacts with heterogeneous nuclear ribonucleoproteins and dengue nonstructural protein 1 and is important for viral replication and release. *Mol. Biosyst.* 6: 795-806.
6. Davis, T.L., et al. 2010. Structural and biochemical characterization of the human cyclophilin family of peptidyl-prolyl isomerases. *PLoS Biol.* 8: e1000439.
7. Bessonov, S., et al. 2010. Characterization of purified human Bact spliceosomal complexes reveals compositional and morphological changes during spliceosome activation and first step catalysis. *RNA* 16: 2384-2403.

CHROMOSOMAL LOCATION

Genetic locus: PPWD1 (human) mapping to 5q12.3; Ppww1 (mouse) mapping to 13 D1.

SOURCE

PPWD1 (E-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of PPWD1 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

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-165279 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PPWD1 (E-15) is recommended for detection of PPWD1 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).

PPWD1 (E-15) is also recommended for detection of PPWD1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for PPWD1 siRNA (h): sc-91596, PPWD1 siRNA (m): sc-152430, PPWD1 shRNA Plasmid (h): sc-91596-SH, PPWD1 shRNA Plasmid (m): sc-152430-SH, PPWD1 shRNA (h) Lentiviral Particles: sc-91596-V and PPWD1 shRNA (m) Lentiviral Particles: sc-152430-V.

Molecular Weight of PPWD1: 74 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™ 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.

RESEARCH USE

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