Revision 1

#3804 Store at -20C

# Phospho-PPIG (Ser376) Antibody

Cell Signaling TECHNOLOGY®

**Orders:** 877-616-CELL (2355) orders@cellsignal.com

**Support:** 877-678-TECH (8324)

**Web:** info@cellsignal.com cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

**For Research Use Only. Not for Use in Diagnostic Procedures.**

| Applications: | Reactivity: | Sensitivity: | MW (kDa): | Source: | UniProt ID: | Entrez-Gene Id: |
|---|---|---|---|---|---|---|
| WB | H M R Mk | Endogenous | 110 | Rabbit | #Q13427 | 9360 |

## Product Usage Information

| Application | Dilution |
|---|---|
| Western Blotting | 1:1000 |

## Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

## Specificity / Sensitivity

Phospho-PPIG (Ser376) Antibody detects endogenous levels of PPIG protein only when phosphorylated at Ser376.

## Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser376 of human PPIG. Antibodies are purified by peptide affinity chromatography.

## Background

PPIG belongs to a highly conserved class of cyclophilins that function as peptidyl-prolyl-isomerases (PPIases) to catalyze the conversion of cis-proline to trans-proline in a polypeptide chain (1-4). PPIG contains an amino-terminal cyclophilin domain followed by Nopp140 repeats that are involved in its function as a nuclear chaperone (5). The carboxy-terminal of PPIG contains a SR (arginine-serine dipeptide repeat) domain (3,4) that is involved in pre-mRNA splicing and processing (6). PPIG interacts with the carboxy-terminal domain of RNA polymerase II as well as several other SR family splicing factors. These interactions lead to changes in localization and conformation and suggest a regulatory role in transcription and pre-mRNA splicing in the elongating RNA polymerase complex (7,8). PPIG is found in the nuclear matrix and nuclear speckles and is involved in the regulation of gene expression. PPIG shows a predominantly diffuse cytoplasmic distribution at the onset of mitosis, and in late telophase the isomerase is recruited to the newly formed nuclei (9).
Phosphorylation of Ser376 on PPIG was identified as a consensus site fit for ACG kinase at Cell Signaling Technology (CST) using PhosphoScan®, a CST's LC-MS/MS platform for phosphorylation site discovery (10).

## Background References

1. Fischer, G. et al. (1989) *Nature* 337, 476-8.
2. Freskgård, P.O. et al. (1992) *Science* 258, 466-8.
3. Nestel, F.P. et al. (1996) *Gene* 180, 151-5.
4. Mortillaro, M.J. and Berezney, R. (1998) *J Biol Chem* 273, 8183-92.
5. Meier, U.T. and Blobel, G. (1992) *Cell* 70, 127-38.
6. Zahler, A.M. et al. (1993) *Science* 260, 219-22.
7. Lin, C.L. et al. (2004) *Biochem Biophys Res Commun* 321, 638-47.
8. Bourquin, J.P. et al. (1997) *Nucleic Acids Res* 25, 2055-61.
9. Dubourg, B. et al. (2004) *J Biol Chem* 279, 22322-30.
10. Rush, J. et al. (2005) *Nat Biotechnol* 23, 94-101.

## Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

## Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

## Applications Key

**WB:** Western Blotting

## Cross-Reactivity Key

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
**X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
**GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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