

#4157 Store at -20C

## PZR Antibody

Cell Signaling  
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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, IP	H Mk	Endogenous	30-50	Rabbit	#O95297	9019

## Product Usage Information

## Application

Western Blotting  
Immunoprecipitation

## Dilution

1:1000  
1:50

## 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

PZR Antibody detects endogenous levels of total PZR protein.

## Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the N terminus of human PZR. Antibodies are purified by protein A and peptide affinity chromatography.

## Background

PZR (Protein zero related) is an immunoglobulin superfamily protein that specifically binds the tyrosine phosphatase SHP-2 through its intracellular immunoreceptor tyrosine-based inhibitory motifs (ITIMs) (1,2). PZR is phosphorylated by c-Src, c-Fyn, c-Lyn, Csk, and c-Abl (3). PP1, a Src family kinase inhibitor, inhibits PZR phosphorylation (4,5). There are three alternatively spliced isoforms, designated as PZR, PZR<sub>a</sub>, and PZR<sub>b</sub>; both PZR<sub>a</sub> and PZR<sub>b</sub> lack ITIMs (6,7). PZR is the main receptor of ConA and has an important role in cell signaling via c-Src (4). PZR is expressed in many cell types and is localized to cell contacts and intracellular granules in BAECs and mesothelioma (REN) cells. PZR has been implicated as a cell adhesion protein that may be involved in SHP-2-dependent signaling at interendothelial cell contacts (3). Hypertyrosine phosphorylation of PZR was observed during embryogenesis in a mouse model of Noonan syndrome (8).

## Background References

1. Zhao, Z.J. and Zhao, R. (1998) *J Biol Chem* 273, 29367-72.
2. Zhao, R. and Zhao, Z.J. (2000) *J Biol Chem* 275, 5453-9.
3. Kusano, K. et al. *Endothelium* 15, 127-36.
4. Zhao, R. et al. (2002) *J Biol Chem* 277, 7882-8.
5. Zhao, R. et al. (2003) *J Biol Chem* 278, 42893-8.
6. Zannettino, A.C. et al. (2003) *Biochem J* 370, 537-49.
7. Zhao, R. and Zhao, Z.J. (2003) *Biochem Biophys Res Commun* 303, 1028-33.
8. Eminaga, S. and Bennett, A.M. (2008) *J Biol Chem* 283, 15328-38.

## 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 IP: Immunoprecipitation

## 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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