

## Database of PTP, DSP and related structures determined by X-ray crystallography and NMR

PTP	Species	Ligand	Mutation	PDB ID	Authors	Journal	Title	Link	Year
LAR	Human (Domain D1&2)	Apo	None	<a href="#">1LAR</a>	H.J.Nam, F.Poy, N.Krueger, H.Saito	Cell	Crystal Structure of the Tandem Phosphatase Domain	<a href="#">Nam et al</a>	2000
TCPTP	Human	Apo	None	<a href="#">1L8K</a>	L.F.Iversen,K.B.Moller,A.K.Pedersen	J.Biol.Chem.	Structure Determination of T Cell Protein-Tyrosine Phosphatase	<a href="#">Iversen et al</a>	2002
PTPalpha (D1)	Mouse (Domain D1)	Apo	None	<a href="#">1YFQ</a>	A.M.Bilwes,J.den Hertog,T.Hunter,J.Nature		Structural basis for inhibition of receptor protein-tyrosin	<a href="#">Bilwes et al</a>	1996
PTPalpha (D2)	Mouse (Domain D2)	Apo	None	<a href="#">1P15</a>	Sonnenburg, E. D., Bilwes, A., Hunt	Biochemistry	Structure of the Membrane Distal Phosphatase Domain	<a href="#">Sonnenburg et al</a>	2003
PTPmu	Human (Domain D1)	Apo	None	<a href="#">1RPM</a>	K.M.Hoffmann,N.K.Tonks,D.Barford	J Biol Chem	The crystal structure of domain 1 of receptor protein-ty	<a href="#">Hoffmann et al</a>	1997
SHP1	Human			<a href="#">2B30</a>	Yang, J., Liu, L., He, D., Song, X.	J Biol Chem	Crystal structure of human protein-tyrosine phosphatase	<a href="#">Yang et al</a>	2003
SHP1	Human	Apo	None	<a href="#">1GWZ</a>	J.Yang,X.Liang,T.Niu,W.Meng,Z.Zh	J.Biol.Chem.	Crystal Structure of the Catalytic Domain of Protein-Ty	<a href="#">Yang et al</a>	1998
SHP1	Human (mutant)	Peptide from the Signal-Regulatory Protein SIRP $\alpha$ : EDTLTP	Active site C453S	<a href="#">1FPR</a>	J.Yang,Z.Cheng,Z.Niu,Z.J.Zhao,G.	J.Biol.Chem.	Structural Basis for Substrate Specificity of Protein Tyr	<a href="#">Yang et al</a>	2000
SHP2	Human	Apo		<a href="#">F513S</a>	P.Hof,S.Pluskey,S.Dhe-Paganon,M	Cell	Crystal structure of the tyrosine phosphatase SHP-2	<a href="#">Hof et al</a>	1998
PTPSL	Mouse	Apo	None	<a href="#">1JLN</a>	S.E.Szedlaczek,A.R.Aricescu,T.A.F	J.Mol.Biol.	Crystal Structure of Ptp-SIP/ptpb7 Catalytic Domain: Im	<a href="#">Szedlaczek et al</a>	2001
CD45	Human	T-cell Receptor CD3 zeta ITAM-1 peptide Motif	Active site D1 C828S	<a href="#">1YGR</a>	Nam, H.J. Poy, F. Saito, H. Frederic	J. Exp. Med.	Structural basis for the function and regulation of the re	<a href="#">Nam et al</a>	2005
CD45	Human	Polyoma Middle T-antigen Peptide motif	Active site D1 C828S	<a href="#">1YGU</a>	Nam, H.J. Poy, F. Saito, H. Frederic	J. Exp. Med.	Structural basis for the function and regulation of the re	<a href="#">Nam et al</a>	2005
PTPBAS	Human	Apo	None	<a href="#">1WCH</a>	Villa F, Deak M, Bloomberg GB, Ale	J Biol Chem	Crystal structure of the PTP1L/FAP-1 human tyrosine	<a href="#">Villa et al</a>	2005
STEP	Human	Apo	None	<a href="#">2BJJ</a>	A. Barr, J. E. Debreczeni, J. Eswara	Unpublished	Crystal Structure Of The Human Protein Tyrosine Phosphatase Ptpn5	<a href="#">Barr et al</a>	2005
STEP	Human	Apo	None	<a href="#">2BV5</a>	Debreczeni, J.E., Barr, A., Eswara	Unpublished	Crystal Structure of the Human Protein Tyrosine Phosphatase Ptpn5	<a href="#">Barr et al</a>	2005
PTPkappa	Human (Domain D1)	Apo	None	<a href="#">2C7S</a>	Debreczeni, J.E., Eswaran, J., Barr	Unpublished	Crystal Structure of Human Protein Tyrosine Phosphatase Kappa at 1.3	<a href="#">Debreczeni et al</a>	2005
PTPsigma	Human (Domain D1&2)	Apo	None	<a href="#">2FH7</a>	Alvarado, J., Udupi, R., Smith, D.	Unpublished	Crystal structure of the phosphatase domains of human PTP SIGM	<a href="#">Alvarado et al</a>	2005
PTPD2	Human	Apo	None	<a href="#">2BZL</a>	Debreczeni, J.E., Barr, A., Eswara	Unpublished	Crystal Structure of the Human Protein Tyrosine Phosphatase N14 at 1.3	<a href="#">Debreczeni et al</a>	2005
HePTP	Human	Apo	None	<a href="#">1ZC0</a>	Mustelin, T., Tautz, L., Page, R	J.Mol.Biol.	Structure of the hematopoietic tyrosine phosphatase (H	<a href="#">Mustelin et al</a>	2005
HePTP	Human	Apo	None	<a href="#">2A3K</a>	Barr, A., Turnbull, A.P., Das, S., E	Unpublished	Crystal Structure of the Human Protein Tyrosine Phosphatase, PTPN7	<a href="#">Barr et al</a>	2005
PCPTP1	Human	Apo	None	<a href="#">2A8B</a>	Ugochukwu, E., Eswaran, J., Barr	Unpublished	Crystal Structure of the Catalytic Domain of Human Tyrosine Phosphat	<a href="#">Ugochukwu et al</a>	2005
PTPbeta	Human	Apo	None	<a href="#">2AHS</a>	Ugochukwu, E., Eswaran, J., Barr	Unpublished	Crystal Structure of the Catalytic Domain of Human Tyrosine Receptor	<a href="#">Ugochukwu et al</a>	2005
PTPH1 (PTPN3)	Human	Apo	None	<a href="#">2B49</a>	Ugochukwu, E., Arrowsmith, C., B	Unpublished	Structure of the Catalytic Domain of Protein Tyrosine Phosphatase, noi	<a href="#">Ugochukwu et al</a>	2005
PTP1B	Human	Tungstate	None	<a href="#">2HNQ</a>	D.Barford,A.J.Flint,N.K.Tonks	Science	Crystal structure of human protein tyrosine phosphatase	<a href="#">Barford et al</a>	1994
PTP1B	Human	Apo	None	<a href="#">2HNP</a>	D.Barford,A.J.Flint,N.K.Tonks	Science	Crystal structure of human protein tyrosine phosphatase	<a href="#">Barford et al</a>	1994
PTP1B	Human	Apo (WPD-loop is closed)	None	<a href="#">1SUG</a>	A.K. Pedersen, Peters G Gu, Moller	Acta Crystallogr D Biol	Water molecule network and active site flexibility of ap	<a href="#">Pedersen et al</a>	2004
PTP1B	Human (mutant)	Apo (mutant)	Active site C215S	<a href="#">1I57</a>	G.Scapin,S.Patel,V.Patel,B.Kenned	Protein Sci.	The Structure of Apo Protein Tyrosine Phosphatase 1B	<a href="#">Scapin et al</a>	2001
PTP1B	Human (mutant)	Apo (mutant)	Active site C215D	<a href="#">1PA1</a>	Romsicki, Y., Scapin, G., Beaulieu-	J Biol Chem	Functional Characterization and Crystal Structure of th	<a href="#">Romsicki et al</a>	2003
PTP1B	Human (mutant)	Apo (mutant) 2-(Oxalyl-amino)-4,7-Dihydro-5H-Thieno[2,3-C]Pyridine	R47V D48N M258C G25E	<a href="#">1GFY</a>	G.H.Peters,L.F.Iversen,S.Branner	J Biol Chem.	Residue 259 is a Key Determinant of Substrate Specificity	<a href="#">Peters et al</a>	2000
PTP1B	Human (mutant)	Phosphotyrosine	Active site C215S	<a href="#">1PTV</a>	Z.Jia,D.Barford,A.J.Flint,N.K.Tonks	Biochemistry	Structural basis for phosphotyrosine peptide recognition	<a href="#">Jia et al</a>	1995
PTP1B	Human (mutant)	Phosphotyrosine (complexed with two pTyr molecules)	Active site C215S	<a href="#">1PTY</a>	Y.A.Puius,Y.Zhao,M.Sullivan,D.S.L	Proc Natl Acad Sci U S A	Identification of a second aryl phosphate-binding site in	<a href="#">Puius et al</a>	1997
PTP1B	Human (mutant)	Bis(para-phosphophenyl)methane (BPPM)	Active site C215S	<a href="#">1AAX</a>	Y.A.Puius,Y.Zhao,M.Sullivan,D.S.L	Proc Natl Acad Sci U S A	Identification of a second aryl phosphate-binding site in	<a href="#">Puius et al</a>	1997
PTP1B	Human (mutant)	Peptide: DAD(Bpa)YLIPQQG	Active site C215S	<a href="#">1EEN</a>	M.Sarmiento,Y.A.Puius,S.W.Vetter	Biochemistry	Structural Basis of Plasticity in Protein Tyrosine Phosph	<a href="#">Sarmiento et al</a>	2000
PTP1B	Human (mutant)	Peptide: ELEFPYMDYE	Active site C215S	<a href="#">1FE0</a>	M.Sarmiento,Y.A.Puius,S.W.Vetter	Biochemistry	Structural Basis of Plasticity in Protein Tyrosine Phosph	<a href="#">Sarmiento et al</a>	2000
PTP1B	Human (mutant)	Peptide from the Insulin Receptor (Tri-phosphorylated): RDIP	Active site C215A	<a href="#">1G1F</a>	A.Salmeen,J.N.Andersen,M.P.Myer	Mol. Cell	Molecular Basis for Dephosphorylation of the Activatio	<a href="#">Salmeen et al</a>	2000
PTP1B	Human (mutant)	Peptide from the Insulin Receptor (Mono-phosphorylated): EPT	Active site C215A	<a href="#">1G1G</a>	A.Salmeen,J.N.Andersen,M.P.Myer	Mol. Cell	Molecular Basis for Dephosphorylation of the Activatio	<a href="#">Salmeen et al</a>	2000
PTP1B	Human (mutant)	Peptide from the Insulin Receptor (Bis-phosphorylated): ETIP	Active site C215A	<a href="#">1G1H</a>	A.Salmeen,J.N.Andersen,M.P.Myer	Mol. Cell	Molecular Basis for Dephosphorylation of the Activatio	<a href="#">Salmeen et al</a>	2000
PTP1B	Human (mutant)	Peptide from the Epidermal Growth Factor Receptor: DEPY	Active site C215S	<a href="#">1PTT</a>	Z.Jia,D.Barford,A.J.Flint,N.K.Tonks	Science	Structural basis for phosphotyrosine peptide recognition	<a href="#">Jia et al</a>	1995
PTP1B	Human (mutant)	Peptide from the Epidermal Growth Factor Receptor: DADE	Active site C215S	<a href="#">1PTU</a>	Z.Jia,D.Barford,A.J.Flint,N.K.Tonks	Science	Structural basis for phosphotyrosine peptide recognition	<a href="#">Jia et al</a>	1995
PTP1B	Human (mutant)	Phosphocysteine	Q262A (Phosphate link t	<a href="#">1A5Y</a>	A.D.Pannifer,A.J.Flint,N.K.Tonks,D	J Biol Chem	Visualization of the cysteinyl-phosphate intermediate c	<a href="#">Pannifer et al</a>	1998
PTP1B	Human	4-Carbamoyl-4[(8-(Difluorophosphonomethyl))Naphthalene-2-yl]butanoic acid	None	<a href="#">1BZC</a>	M.R.Groves,Z.J.Yao,P.P.Roller,T.R	Biochemistry	Structural Basis for Inhibition of the Protein Tyrosine P	<a href="#">Groves et al</a>	1998
PTP1B	Human	Cyclic peptide inhibitor: DADEXLX	None	<a href="#">1BZH</a>	M.R.Groves,Z.J.Yao,P.P.Roller,T.R	Biochemistry	Structural Basis for Inhibition of the Protein Tyrosine P	<a href="#">Groves et al</a>	1998
PTP1B	Human	6-(Difluorophosphonomethyl)naphthalene-2-carboxylic acid	None	<a href="#">1BZJ</a>	M.R.Groves,Z.-J.Yao,D.T.B.Barford	Biochemistry	Structural Basis for Inhibition of the Protein Tyrosine P	<a href="#">Groves et al</a>	1998
PTP1B	Human	6-(Oxalyl-Amino)-1H-Indole-5-Carboxylic Acid	None	<a href="#">1C83</a>	H.S.Andersen,L.F.Iversen,C.B.Jepp	J Biol Chem.	2-(Oxalylamino)-Benzoic Acid is a General, Competitive	<a href="#">Andersen et al</a>	2000
PTP1B	Human	3-(Oxalyl-Amino)-Naphthalene-2-Carboxylic Acid	None	<a href="#">1C84</a>	H.S.Andersen,L.F.Iversen,C.B.Jepp	J Biol Chem.	2-(Oxalylamino)-Benzoic Acid is a General, Competitive	<a href="#">Andersen et al</a>	2000
PTP1B	Human	2-(Oxalyl-Amino)-Benzoic Acid	None	<a href="#">1C85</a>	H.S.Andersen,L.F.Iversen,C.B.Jepp	J Biol Chem.	2-(Oxalylamino)-Benzoic Acid is a General, Competitive	<a href="#">Andersen et al</a>	2000
PTP1B	Human (mutant)	2-(Oxalyl-Amino-4,7-Dihydro-5H-Thieno[2,3-C]Pyridine	R47V, D48N	<a href="#">1C86</a>	L.F.Iversen,H.S.Andersen,S.Branner	J Biol Chem.	Structure-Based Design of a Low Molecular Weight, N	<a href="#">Iversen et al</a>	2000
PTP1B	Human	2-(Oxalyl-Amino-4,7-Dihydro-5H-Thieno[2,3-C]Pyridine	None	<a href="#">1C87</a>	L.F.Iversen,H.S.Andersen,S.Branner	J Biol Chem.	Structure-Based Design of a Low Molecular Weight, N	<a href="#">Iversen et al</a>	2000
PTP1B	Human	2-(Oxalyl-Amino)-4,5,6,7-Tetrahydro-Thieno[2,3-C]Pyridine	None	<a href="#">1C88</a>	L.F.Iversen,H.S.Andersen,S.Branner	J Biol Chem.	Structure-Based Design of a Low Molecular Weight, N	<a href="#">Iversen et al</a>	2000
PTP1B	Human	5-Iodo-2-(oxalylamino)benzoic acid	None	<a href="#">1FEC</a>	H.S.Andersen,L.F.Iversen,C.B.Jepp	J Biol Chem.	2-(Oxalylamino)-Benzoic Acid is a General, Competitive	<a href="#">Andersen et al</a>	2000
PTP1B	Human	Inhibitor Pnu177496: analogue of cholecystokinin(26(-)-33)	None	<a href="#">1G7F</a>	J.E.Bleasdale,D.Ogg,B.J.Palazuk	Biochemistry	Small Molecule Peptidomimetics Containing a Novel P	<a href="#">Bleasdale et al</a>	2001
PTP1B	Human	Inhibitor Pnu179326: analogue of cholecystokinin(26(-)-33)	None	<a href="#">1G7G</a>	J.E.Bleasdale,D.Ogg,B.J.Palazuk	Biochemistry	Small Molecule Peptidomimetics Containing a Novel P	<a href="#">Bleasdale et al</a>	2001
PTP1B	Human	5-(2-{2-[(tert-Butoxy-Hydroxy-Methyl)-Amino]-1-Hydroxy-3-Propylthio}ethyl)benzoic acid	None	<a href="#">1JF7</a>	S.D.Larsen,T.Barf,C.Liljebrijs,P.D.M	J. Med. Chem	Synthesis and Biological Activity of a Novel Class of S	<a href="#">Larsen et al</a>	2002
PTP1B	Human	[(7-(Difluoro-Phosphono-Methyl)-Naphthalen-2-yl)-Difluoro-Naphthalen-2-yl]-Butyl-Phenyl	None	<a href="#">1KAK</a>	Z.Jia,Q.Ye,A.N.Dinaut,Q.Wang,D.W	J. Med.Chem.	Structure of Protein Tyrosine Phosphatase 1B in Comp	<a href="#">Jia et al</a>	2001
PTP1B	Human	[(4-{4-(4-(Difluoro-Phosphono-Methyl)-Phenyl)-Butyl}-Phenyl)-Phenyl]	None	<a href="#">1KAV</a>	Z.Jia,Q.Ye,A.N.Dinaut,Q.Wang,D.W	J. Med.Chem.	Structure of Protein Tyrosine Phosphatase 1B in Comp	<a href="#">Jia et al</a>	2001
PTP1B	Human	7-(1,1-Dioxo-1H-Benzodiazol-3-yl)oxy-methyl)-2-(Oxalylamino)-4,7-Dihydro-5H-Thieno[2,3-C]Pyridine	None	<a href="#">1L8G</a>	L.F.Iversen,H.S.Andersen,K.B.Moller	Biochemistry	Steric Hindrance as a Basis for Structure-Based Design	<a href="#">Iversen et al</a>	2001

PTP1B	Human	N-Benzoyl-L-Glutamyl-[4-Phosphono(Difluoromethyl)]-L-Phenylalanine	None	<a href="#">1LQF</a>	E.Asante-Appiah,S.Patel,C.Dufresne	Biochemistry	The Structure of Ptp-1B in Complex with a Peptide Inhibitor	<a href="#">Asante-Appiah et al</a>	1999
PTP1B	Human	N-{1-[5-(1-Carbamoyl-2-Mercapto-Ethylcarbamoyl)-Pentylideneamino]-2-(2-Acetylamino-2-Pentylcarbamoyl-Ethyl)-Naphthalen-1-yl}acetamide	None	<a href="#">1N6W</a>	J.P.Sun,A.Fedorov,S.Y.Lee,X.L.Guo	J.Biol.Chem.	Crystal Structure of Ptp1B Complexed with a Potent and Selective Inhibitor	<a href="#">Sun et al</a>	2003
PTP1B	Human	2-[(4-(2-Acetylamino-2-Pentylcarbamoyl-Ethyl)-Naphthalen-1-yl)amino]ethane-1-thiol	None	<a href="#">1NL9</a>	B.G.Szczepankiewicz,G.Liu,P.J.Hajdu	J.Am.Chem.Soc.	Discovery of a Potent, Selective Protein Tyrosine Phosphatase Inhibitor	<a href="#">Szczepankiewicz et al</a>	2003
PTP1B	Human	3-{5-[(N-Acetyl-3-[4-(Carboxycarbonyl)(2-Carboxyphenyl)amino]butyl)amino]phenyl}propanoic acid	None	<a href="#">1NNY</a>	B.G.Szczepankiewicz,G.Liu,P.J.Hajdu	J.Am.Chem.Soc.	Discovery of a Potent, Selective Protein Tyrosine Phosphatase Inhibitor	<a href="#">Szczepankiewicz et al</a>	2003
PTP1B	Human	2-[(Carboxycarbonyl)(1-Naphthyl)amino]benzoic acid	None	<a href="#">1NO6</a>	B.G.Szczepankiewicz,G.Liu,P.J.Hajdu	J.Am.Chem.Soc.	Discovery of a Potent, Selective Protein Tyrosine Phosphatase Inhibitor	<a href="#">Szczepankiewicz et al</a>	2003
PTP1B	Human (mutant)	3-(4-{2-[2-(2-Bromo-Acetylamino)-Ethyl]disulfanyl}-Ethyl)carbamoyl-L-proline	C32S, R47C, C92V	<a href="#">1NWL</a>	D.A.Erlanson,R.S.Modowell,M.M.Hughes	J.Am.Chem.Soc.	Discovery of a New Phosphotyrosine Mimetic for Ptp1B	<a href="#">Erlanson et al</a>	2003
PTP1B	Human (mutant)	Compound linked to Cys at position 47	C32S, R47C, C92V	<a href="#">1NWE</a>	DA Erlanson, McDowell RS, He MMJ	Am Chem Soc	Discovery of a New Phosphotyrosine Mimetic for Ptp1B	<a href="#">Erlanson et al</a>	2003
PTP1B	Human	Compound 19	None	<a href="#">1N7Z</a>	Xin, Z., Oost, T.K., Abad-Zapatero, J.	Bioorg Med Chem Lett	Potent, selective inhibitors of PTP1B using a second phosphate binding site	<a href="#">Xin et al</a>	2003
PTP1B	Human	PTP1B with the catalytic cysteine oxidized to sulfonic acid	None	<a href="#">1OEO</a>	Salmeen, A., Andersen, J.N., Myers, J.	Nature	Redox Regulation of Protein Tyrosine Phosphatase 1B	<a href="#">Salmeen et al</a>	2003
PTP1B	Human	PTP1B with the catalytic cysteine oxidized to a sulfinyl-amide	None	<a href="#">1OEM</a>	Salmeen, A., Andersen, J.N., Myers, J.	Nature	Redox Regulation of Protein Tyrosine Phosphatase 1B	<a href="#">Salmeen et al</a>	2003
PTP1B	Human	2-[4-{2-(S)-Allyloxy-carbonylamino-3-(4-{2-(Carboxy-Phenyl)amino}butyl)amino}phenyl]propanoic acid	None	<a href="#">1PH0</a>	Liu, G., Xin, Z., Liang, H., Abad-Zapatero, J.	J Med Chem	Selective Protein Tyrosine Phosphatase 1B Inhibitors	<a href="#">Liu et al</a>	2003
PTP1B	Human	Oxalyl-Aryl-Amino Benzoic Acid Inhibitor	None	<a href="#">1ONZ</a>	Liu G, Szczepankiewicz BG, Pei Z, Sun J, P, Fedorov A, Lee S, Y, Hajdu PJ	J Med Chem	Discovery and structure-activity relationship of oxalyl-aryl-amino benzoic acid inhibitors of protein tyrosine phosphatase 1B	<a href="#">Liu G et al</a>	2003
PTP1B	Human	N-{1-[5-(1-Carbamoyl-2-Mercapto-Eethylcarbamoyl)-Pentylideneamino]-2-(2-Tert-Butoxycarbonylamino-2-[4-(3-Hydroxy-2-Methylbutyl)amino]phenyl)propanoic acid}	None	<a href="#">1PYN</a>	Pei, Z., Li, X., Liu, G., Abad-Zapatero, J.	Bioor Med Chem Lett	Discovery and Sar of Novel, Potent and Selective Protein Tyrosine Phosphatase 1B Inhibitors	<a href="#">Pei et al</a>	2003
PTP1B	Human	5-[2-Fluoro-5-[3-(3-Hydroxy-2-Methoxycarbonyl-Phenoxy)-Phenoxy]ethyl]benzoic acid	None	<a href="#">1Q1M</a>	Liu, G., Xin, Z., Pei, Z., Hajduk, P. J.	J Med Chem	Fragment Screening and Assembly: A Highly Efficient Approach to the Discovery of Protein Tyrosine Phosphatase 1B Inhibitors	<a href="#">Liu et al</a>	2003
PTP1B	Human	Oxidized form	None	<a href="#">1OES</a>	Van Montfort, R.L.M., Congreve, M.	Nature	Oxidation state of protein tyrosine phosphatase 1B	<a href="#">Montfort et al</a>	2003
PTP1B	Human	Oxidized form	None	<a href="#">1OET</a>	Van Montfort, R.L.M., Congreve, M.	Nature	Oxidation state of protein tyrosine phosphatase 1B	<a href="#">Montfort et al</a>	2003
PTP1B	Human	Oxidized form	None	<a href="#">1OEU</a>	Van Montfort, R.L.M., Congreve, M.	Nature	Oxidation state of protein tyrosine phosphatase 1B	<a href="#">Montfort et al</a>	2003
PTP1B	Human	Oxidized form	None	<a href="#">1OEV</a>	Van Montfort, R.L.M., Congreve, M.	Nature	Oxidation state of protein tyrosine phosphatase 1B	<a href="#">Montfort et al</a>	2003
PTP1B	Human	Compound 2	None	<a href="#">1Q6J</a>	Scapin, G., Patel, S.B., Becker, J.W.	Biochemistry	The structural basis for the selectivity of benzotriazole	<a href="#">Scapin et al</a>	2003
PTP1B	Human	Compound 3	None	<a href="#">1Q6M</a>	Scapin, G., Patel, S.B., Becker, J.W.	Biochemistry	The structural basis for the selectivity of benzotriazole	<a href="#">Scapin et al</a>	2003
PTP1B	Human	Compound 4	None	<a href="#">1Q6N</a>	Scapin, G., Patel, S.B., Becker, J.W.	Biochemistry	The structural basis for the selectivity of benzotriazole	<a href="#">Scapin et al</a>	2003
PTP1B	Human	Compound 6	None	<a href="#">1Q6P</a>	Scapin, G., Patel, S.B., Becker, J.W.	Biochemistry	The structural basis for the selectivity of benzotriazole	<a href="#">Scapin et al</a>	2003
PTP1B	Human	Compound 9	None	<a href="#">1Q6S</a>	Scapin, G., Patel, S.B., Becker, J.W.	Biochemistry	The structural basis for the selectivity of benzotriazole	<a href="#">Scapin et al</a>	2003
PTP1B	Human	Compound 11	None	<a href="#">1Q6T</a>	Scapin, G., Patel, S.B., Becker, J.W.	Biochemistry	The structural basis for the selectivity of benzotriazole	<a href="#">Scapin et al</a>	2003
PTP1B	Human	Compound	None	<a href="#">1QXK</a>	Xin Z, Liu G, Abad-Zapatero C, Pei Z, Sun J, P, Fedorov A, Lee S, Y, Hajdu PJ	Bioorg Med Chem Lett	Monoacid-Based, Cell Permeable, Selective Inhibitors of Protein Tyrosine Phosphatase 1B	<a href="#">Xin et al</a>	2003
PTP1B	Human	Allosteric Inhibitor	None	<a href="#">1T48</a>	C. Wiesmann, K. J. Barr, J. Kung, J.	Nat. Struct. Mol. Biol.	Allosteric Inhibition of Protein Tyrosine Phosphatase 1B	<a href="#">Wiesmann et al</a>	2004
PTP1B	Human	Allosteric Inhibitor	None	<a href="#">1T49</a>	C. Wiesmann, K. J. Barr, J. Kung, J.	Nat. Struct. Mol. Biol.	Allosteric Inhibition of Protein Tyrosine Phosphatase 1B	<a href="#">Wiesmann et al</a>	2004
PTP1B	Human	Allosteric Inhibitor	None	<a href="#">1T4J</a>	C. Wiesmann, K. J. Barr, J. Kung, J.	Nat. Struct. Mol. Biol.	Allosteric Inhibition of Protein Tyrosine Phosphatase 1B	<a href="#">Wiesmann et al</a>	2004
PTP1B	Human	Isoxazole Carboxylic Acid	None	<a href="#">1XB0</a>	Zhao, H. Liu, G. Xin, Z. Serby, M. Fedorov, A. Lee, S. Y., Hajdu, P. J.	Bioorg.Med.Chem.Lett	Isoxazole Carboxylic Acids as Protein Tyrosine Phosphatase 1B Inhibitors	<a href="#">Zhao et al</a>	2004
PTP1B (mutant)	Human	Insulin receptor tyrosine kinase	C215A	<a href="#">2B4S</a>	Li, S., Depetris, R.S., Barford, D., J. Biol. Chem.	Structure	Crystal Structure of a Complex between Protein Tyrosine Phosphatase 1B and Insulin Receptor Tyrosine Kinase	<a href="#">Li et al</a>	2005
PTP1B	Human	C15 H13 N2 O4 S	None	<a href="#">2BGD</a>	Black, E., Breed, J., Breeze, A.L., Bioorg.Med.Chem.Lett	Structure-Based Design of Protein Tyrosine Phosphatase 1B Inhibitors	<a href="#">Black et al</a>	2005	
PTP1B	Human	Small molecule	None	<a href="#">2BGE</a>	Black, E., Breed, J., Breeze, A.L., Bioorg.Med.Chem.Lett	Structure-Based Design of Protein Tyrosine Phosphatase 1B Inhibitors	<a href="#">Black et al</a>	2005	
PTP1B	Human	C10 H7 N O5 S	None	<a href="#">2AZR</a>	Moretto, A.F., Kirincich, S.J., Xu, V. Bioorg.Med.Chem	Bicyclic and tricyclic thiophenes as protein tyrosine phosphatase 1B inhibitors	<a href="#">Moretto et al</a>	2005	
PTP1B	Human	C25 H24 N2 O7 S3	None	<a href="#">2B07</a>	Moretto, A.F., Kirincich, S.J., Xu, V. Bioorg.Med.Chem	Bicyclic and tricyclic thiophenes as protein tyrosine phosphatase 1B inhibitors	<a href="#">Moretto et al</a>	2005	
PTP1B	Human	Inhibitor: C9 H10 N2 O3	None	<a href="#">1WAX</a>	Hartshorn, M.J., Murray, C.W., Cleland, J.W.K. J.Med.Chem	Fragment-Based Lead Discovery Using X-Ray Crystallography	<a href="#">Hartshorn et al</a>	2005	
PTP1B (mutant)	Human	Apo	S295F	<a href="#">2F6F</a>	Montalibet, J., Skorey, K., McKay, J. Unpublished	The structure of the S295F mutant of human PTP1B			2005
PTP1B	Human	sulfamic acid inhibitor	None	<a href="#">2F6T</a>	Klopfenstein, S.R., Evdokimov, A.G. Unpublished	Protein tyrosine phosphatase 1B with sulfamic acid inhibitors			2005
PTP1B	Human	sulfamic acid inhibitor	None	<a href="#">2F6V</a>	Klopfenstein, S.R., Evdokimov, A.G. Unpublished	Protein tyrosine phosphatase 1B with sulfamic acid inhibitors			2005
PTP1B	Human	sulfamic acid inhibitor	None	<a href="#">2F6W</a>	Klopfenstein, S.R., Evdokimov, A.G. Unpublished	Protein tyrosine phosphatase 1B with sulfamic acid inhibitors			2005
PTP1B	Human	sulfamic acid inhibitor	None	<a href="#">2F6Y</a>	Klopfenstein, S.R., Evdokimov, A.G. Unpublished	Protein tyrosine phosphatase 1B with sulfamic acid inhibitors			2005
PTP1B	Human	sulfamic acid inhibitor	None	<a href="#">2F6Z</a>	Klopfenstein, S.R., Evdokimov, A.G. Unpublished	Protein tyrosine phosphatase 1B with sulfamic acid inhibitors			2005
PTP1B	Human	sulfamic acid inhibitor	None	<a href="#">2F70</a>	Klopfenstein, S.R., Evdokimov, A.G. Unpublished	Protein tyrosine phosphatase 1B with sulfamic acid inhibitors			2005
PTP1B	Human	sulfamic acid inhibitor	None	<a href="#">2F71</a>	Klopfenstein, S.R., Evdokimov, A.G. Unpublished	Protein tyrosine phosphatase 1B with sulfamic acid inhibitors			2005
PTP1B (mutant)	Human	Compound 2 (C32 H28 N3 O5 F2 P)	L119V	<a href="#">2FJM</a>	Asante-Appiah, E., Patel, S.B., De Unpublished	A Flexible Loop Elicits Inhibitor Selectivity for Protein Tyrosine Phosphatase 1B			2006
PTP1B (mutant)	Human	Compound 2 (C32 H28 N3 O5 F2 P)	L119V	<a href="#">2FJN</a>	Asante-Appiah, E., Patel, S.B., De Unpublished	A Flexible Loop Elicits Inhibitor Selectivity for Protein Tyrosine Phosphatase 1B			2006
Cdc25A	Human	Apo	None	<a href="#">1QBO</a>	R.A.Reynolds, Yem AW, Wolfe CL, J.Mol.Cell	Crystal Structure of the Catalytic Subunit of Cdc25B R	<a href="#">Reynolds et al</a>	1999	
Cdc25B	Human	Apo	None	<a href="#">1C25</a>	E. B. Fauman, Coqswell, J. P., Love Cell	Crystal structure of the catalytic domain of the human Cdc25B phosphatase	<a href="#">Fauman et al</a>	1993	
Cdc25B	Human	Tungstate	None	<a href="#">1CWS</a>	R.A.Reynolds,A.W.Yem,C.L.Wolfe, J.Mol.Biol.	Crystal Structure of the Catalytic Subunit of Cdc25B R	<a href="#">Reynolds et al</a>	1999	
Cdc25B	Human	Methyl mercury	None	<a href="#">1CWT</a>	R.A.Reynolds,A.W.Yem,C.L.Wolfe, J.Mol.Biol.	Crystal Structure of the Catalytic Subunit of Cdc25B R	<a href="#">Reynolds et al</a>	1999	
Cdc25-like	Arabidopsis thaliana	Apo (NMR)	None	<a href="#">1T3K</a>	Landrieu I, da Costa M, De Veylder PNAS	A Small Cdc25 Dual-Specificity Tyrosine-Phosphatase	<a href="#">Landrieu et al</a>	2004	
cdc14b	Human	Apo	None	<a href="#">1OHC</a>	C.Gray, V.Good, N.Tonks, D. Barfo Embo J	The Structure of the Cell Cycle Protein Cdc14 Reveals Its Catalytic Mechanism	<a href="#">Gray et al</a>	2003	
cdc14b	Human	Ligand (peptide)	Active site Cys->Ser	<a href="#">1OHE</a>	C.Gray, V.Good, N.Tonks, D. Barfo Embo J	The Structure of the Cell Cycle Protein Cdc14 Reveals Its Catalytic Mechanism	<a href="#">Gray et al</a>	2003	
cdc14b	Human	Tungstate	None	<a href="#">1OHD</a>	C.Gray, V.Good, N.Tonks, D. Barfo Embo J	The Structure of the Cell Cycle Protein Cdc14 Reveals Its Catalytic Mechanism	<a href="#">Gray et al</a>	2003	
PTEN	Human	Apo	None	<a href="#">1D5R</a>	J.O.Lee, H. Yang, M.-M. Georgescu Cell	Crystal Structure of the Pten Tumor Suppressor: Implications for Its Catalytic Mechanism	<a href="#">Lee et al</a>	1999	
MKP3/Pyst1	Human	Apo	None	<a href="#">1MKP</a>	A.E. Stewart, Dowd, S., Keyse, S.M. Nature Structural Bio	Crystal Structure of the Mapk Phosphatase Pyst1 Catalytic Domain	<a href="#">Stewart et al</a>	1999	
MKP/PAC-1	Human (mutant)	Mutant	Active site Cys->Ser	<a href="#">1M3G</a>	A.Farooq, Plotnikova O, Chaturvedi Structure (Camb).	Solution Structure of the Mapk Phosphatase Pac-1 Catalytic Domain	<a href="#">Farooq et al</a>	2003	
VHR	Human	Apo	None	<a href="#">1VHR</a>	J.Yuaniyama,J.M.Denu,J.E.Dixon, Science	Crystal structure of the dual specificity protein phosphatase VHR	<a href="#">Yuaniyama et al</a>	1996	
Pri-1	Human	Sulfate	None	<a href="#">1XM2</a>	Jeong, D.G. Kim, S.J. Kim, J.H. Song J. Mol. Biol	Trimeric structure of PRL-1 phosphatase reveals an active site	<a href="#">Jeong et al</a>	2005	
Pri-1	Rat	Apo	None	<a href="#">1X24</a>	Sun, J.P., Wang, W.Q., Yang, H., Biochemistry	Structure and Biochemical Properties of PRL-1, a Phosphotyrosine Phosphatase	<a href="#">Sune et al</a>	2005	

Pri-1	Rat	Apo	None	<a href="#">1ZCK</a>	Sun, J.P., Wang, W.Q., Yang, H.	Biochemistry	Structure and Biochemical Properties of PRL-1, a Phosphotyrosine Phosphatase	<a href="#">Sune et al</a>	2005
Pri-1	Human	Apo	None	<a href="#">1RXD</a>	Sun, J.P., Fedorov, A.A., Almo, S.	Unpublished	Crystal structure of a hypothetical protein		2004
Pri-3	Human (Inactive conf)	Apo (NMR, 20 structures)	None	<a href="#">1R6H</a>	G.Kozlov, Cheng J, Ziomek E, Bany	J Biol Chem	Structural Insights Into Molecular Function of the Metallophosphatase PRL-3	<a href="#">Kozlov et al</a>	2004
Pri-3	Human (Active Conf)	Apo (NMR)	None	<a href="#">1V3A</a>	Kim, K.A. Song, J.S. Jee, J. Sheen	FEBS Letters	Structure of human PRL-3, the phosphatase associated with the insulin resistance syndrome	<a href="#">Kim et al</a>	2004
Kap	Human (mutant)	Sulfate	Active site C104S	<a href="#">1FPZ</a>	H. Song, N. Hanlon, N. R. Brown, M. M. Brown	Mol. Cell	Phosphoprotein-Protein Interactions Revealed by the Crystal Structure of a Mutant Kinase	<a href="#">Song et al</a>	2001
Kap	Human (mutant)	Phospho-CDK2	Active site C104S	<a href="#">1FQ1</a>	H. Song, N. Hanlon, N. R. Brown, M. M. Brown	Mol. Cell	Phosphoprotein-Protein Interactions Revealed by the Crystal Structure of a Mutant Kinase	<a href="#">Song et al</a>	2001
JSP-1	Human	Apo	None	<a href="#">1WRM</a>	T. Yokota, Kashima, A., Kato, R. and	Unpublished	Crystal Structure Of Novel Human Dual Specificity Phosphatase	<a href="#">Unpublished</a>	2004
MTMR2	Human	Phosphate	Active site C417S	<a href="#">1M7R</a>	Begley, M.J. Taylor, G.S. Kim, S.-A.	Mol Cell	Crystal structure of a phosphoinositide phosphatase, MTMR2	<a href="#">Begley et al</a>	2003
MTMR2	Human	phosphatidylinositol 3-phosphate	Active site C417S	<a href="#">1ZSQ</a>	Begley, M.J., Taylor, G.S., Brock, M.P.	PNAS	Crystal Structure of MTMR2 in complex with phosphatidylinositol 3-phosphate	<a href="#">Begley et al</a>	2006
MTMR2	Human	phosphatidylinositol 3,5-bisphosphate	Active site C417S	<a href="#">1ZVR</a>	Begley, M.J., Taylor, G.S., Brock, M.P.	PNAS	Crystal Structure of MTMR2 in complex with phosphatidylinositol 3,5-bisphosphate	<a href="#">Begley et al</a>	2006
LMW-PTP	Human	MES	None	<a href="#">5PNT</a>	M.Zhang,C.V.Stauffacher,D.Lin,R.L.	J Biol Chem	Crystal structure of a human low molecular weight phosphotyrosine phosphatase	<a href="#">Zhang et al</a>	1998
LMW-PTP	Bos taurus (mutant)	Apo (mutant)	Active site S19A	<a href="#">1COE</a>	L.Tabernero,B.N.Evans,P.A.Tishma	Biochemistry	The Structure of the Bovine Protein Tyrosine Phosphatase Lp-PTP	<a href="#">Tabernero et al</a>	1999
LMW-PTP	S. Cerevisiae	Apo	None	<a href="#">1D1P</a>	S.Wang,L.Tabernero,M.Zhang,E.H.	Biochemistry	Crystal Structures of a Low-Molecular Weight Protein Tyrosine Phosphatase	<a href="#">Wang et al</a>	2000
LMW-PTP	Prostate - rat	Vanadate	None	<a href="#">1RPT</a>	Y. Lindqvist, G. Schneider	Eur J Biochem	Crystal structures of rat acid phosphatase complexed with vanadate	<a href="#">Lindqvist et al</a>	1994
LMW-PTP	Bos taurus	Vanadate/Hepes	None	<a href="#">1DG9</a>	M.Zhang,M.Zhou,R.L.Van Etten,C.V.	Biochemistry	Crystal Structure of Bovine Low Molecular Weight Phosphotyrosine Phosphatase	<a href="#">Zhang et al</a>	1997
LMW-PTP	Bos taurus liver	Sulfate	None	<a href="#">1PHR</a>	X.D. Su, Taddei, N., Stefani, M., Ra	Nature	The crystal structure of a low-molecular-weight phosphotyrosine phosphatase	<a href="#">Su et al</a>	1994
LMW-PTP	Bos taurus heart	Phosphotyrosine	None	<a href="#">1PNT</a>	M.Zhang,R.L.Van Etten,C.V.Stauffa	Biochemistry	Crystal structure of bovine heart phosphotyrosyl phosphatase	<a href="#">Zhang et al</a>	1994
LMW-PTP	S. Cerevisiae (mutant)	pNPP	Active site C14A	<a href="#">1D1Q</a>	S.Wang,L.Tabernero,M.Zhang,E.H.	Biochemistry	Crystal Structure of a Low-Molecular Weight Protein Tyrosine Phosphatase	<a href="#">Wang et al</a>	2000
LMW-PTP	S. Cerevisiae (mutant)	Adenine	Active site C14A	<a href="#">1D2A</a>	S.Wang,C.V.Stauffacher,R.L.Van E	Biochemistry	Structural and Mechanistic Basis for the Activation of a Low-Molecular Weight Protein Tyrosine Phosphatase	<a href="#">Wang et al</a>	2000
sPTP	Salmonella	Bound to Rac1 via its GTPase activating domain	None	<a href="#">1G4U</a>	C.E.Stebbins, J. E. Galan	Mol. Cell	Modulation of Host Signaling by a Bacterial Mimic: Structure of a Phosphotyrosine Phosphatase	<a href="#">Stebbins et al</a>	2000
sPTP	Salmonella	In complex with its secretion chaperone SspC	None	<a href="#">1JYO</a>	C.E.Stebbins,J.E.Galan	Nature	Maintenance of an Unfolded Polypeptide by a Cognate Chaperone	<a href="#">Stebbins et al</a>	2001
sPTP	Salmonella	SptP-Rac1 transition state complex	None	<a href="#">1G4W</a>	C.E.Stebbins,J.E.Galan	Mol. Cell	Modulation of Host Signaling by a Bacterial Mimic: Structure of a Phosphotyrosine Phosphatase	<a href="#">Stebbins et al</a>	2000
Yop51	Yersinia enterocolitica	Nitrate	None	<a href="#">1YTN</a>	E.B.Fauman,C.Yuvaniyama,H.L.Sc	J Biol Chem	The X-ray crystal structures of Yersinia tyrosine phosphatase	<a href="#">Fauman et al</a>	1996
Yop51	Yersinia enterocolitica	Tungstate	None	<a href="#">1YTW</a>	E.B.Fauman,C.Yuvaniyama,H.L.Sc	J Biol Chem	The X-ray crystal structures of Yersinia tyrosine phosphatase	<a href="#">Fauman et al</a>	1996
Yop51	Yersinia enterocolitica	Apo (mutant)	C235R	<a href="#">1YPT</a>	J.A.Stuckey,H.L.Schubert,E.B.Faur	Nature	Crystal structure of Yersinia protein tyrosine phosphatase	<a href="#">Stuckey et al</a>	1994
Yop51	Yersinia enterocolitica	Sulfate	Active site C403S & C235R	<a href="#">1YTS</a>	H.L.Schubert,E.B.Fauman,J.A.Stuc	Protein Sci	A ligand-induced conformational change in the Yersinia protein tyrosine phosphatase	<a href="#">Schubert et al</a>	1995
Yoph (C-terminal)	Yersinia enterocolitica	Phosphate	Active site C403A	<a href="#">1LYV</a>	A.G.Evdokimov,D.S.Waugh,K.Rout	To be Published	High-Resolution Structure of the Catalytically Inactive Yersinia Protein Tyrosine Phosphatase	<a href="#">Evdokimov et al</a>	2003
Yoph	Yersinia enterocolitica	p-Nitrocatechol sulfate	Active site Cys235R	<a href="#">1PA9</a>	J.P.Sun, Wu L, Fedorov A.A, Almo, J	J Biol Chem	Crystal structure of the Yersinia protein-tyrosine phosphatase	<a href="#">Sun et al</a>	2003
Yoph	Yersinia pestis	Hexapeptide (Asp-Ala-Asp-Glu-Fty-Cle)	None	<a href="#">1QZ0</a>	Phan J, Lee K, Cherry S, Tropea J	Biochemistry	High-resolution structure of the Yersinia pestis protein tyrosine phosphatase	<a href="#">Phan J et al</a>	2003
Yoph	Yersinia pestis	Hexapeptide ASP-ALA-ASP-GLU-PTR-CLE	C403S	<a href="#">1XXP</a>	Ivanov, M.I., Stuckey, J.A., Schube	Mol.Microbiol.	Two substrate-targeting sites in the Yersinia protein tyrosine phosphatase	<a href="#">Ivanov et al</a>	2005
Yoph	Yersinia pestis	phosphotyrosyl-containing hexapeptide	None	<a href="#">1XXV</a>	Ivanov, M.I., Stuckey, J.A., Schube	Mol.Microbiol.	Two substrate-targeting sites in the Yersinia protein tyrosine phosphatase	<a href="#">Ivanov et al</a>	2005
mRNA Capping	Mouse	Apo	None	<a href="#">119S</a>	Changela A, Ho CK, Martins A, Shu	Embo J	Structure and Mechanism of the RNA Triphosphatase	<a href="#">Changela et al</a>	2001
mRNA Capping	Human	Apo	None	<a href="#">2C46</a>	Debreczeni, J., Johansson, C., Lo	Unpublished	Crystal Structure of the Human RNA Guanylyltransferase and 5'-Phosphorylation		2005
VHY/DUSP15	Human	Apo	None	<a href="#">1Y24</a>	T.S. Yoon, Jeong, D.G., Kim, J.H., C	Proteins	Crystal structure of the catalytic domain of human VHY phosphatase	<a href="#">Yoon et al</a>	2005
VHR/DUSP3	Human (mutant)	Dde(Ahp)(Tpo)G(Ptr)Vatr	Active site C124S	<a href="#">1J4X</a>	M.A.Schumacher,J.M.Denu,K.G.Ta	Biochemistry	The Structural Basis for Recognition of Bisphosphorylated Substrates by a Protein Tyrosine Phosphatase	<a href="#">Schumacher et</a>	2002
Phytase	Selenomonas ruminantium	None	None	<a href="#">1U24</a>	Chu, H.M., Guo, R.T., Lin, T.W., G	Structure	Structures of Selenomonas ruminantium Phytase in Complex with Phosphate	<a href="#">Chu et al</a>	2004
Phytase	Selenomonas ruminantium	None	None	<a href="#">1U25</a>	Chu, H.M., Guo, R.T., Lin, T.W., G	Structure	Structures of Selenomonas ruminantium Phytase in Complex with Phosphate	<a href="#">Chu et al</a>	2004
Phytase	Selenomonas ruminantium	persulfated phytate (myo-inositol hexaphosphate)	None	<a href="#">1U26</a>	Chu, H.M., Guo, R.T., Lin, T.W., G	Structure	Structures of Selenomonas ruminantium Phytase in Complex with Phosphate	<a href="#">Chu et al</a>	2004
RNA 5'-triphosphatase	Baculovirus	Apo	None	<a href="#">1YN9</a>	Changela, A., Martins, A., Shumar	JBC	Crystal structure of baculovirus RNA triphosphatase	<a href="#">Changela et al</a>	2005

## PTP-related structures including auxillary domains

PTP	Species	Ligand	Mutation	PDB ID
N-terminal SH2 domain	Mouse	Peptide from PDGFR (site 1009): VLpYTAVQP		<a href="#">1AYA</a>
N-terminal SH2 domain	Mouse	Peptide from IRS-1 (site 895): GEpYVNIIEF		<a href="#">1AYB</a>
N-terminal SH2 domain	Mouse	Peptide from the PDGFR (site 740): GpYMDMS		<a href="#">1AYC</a>
N-terminal SH2 domain	Mouse	No ligand	None	<a href="#">1AYD</a>
N-Terminal domain	Yersinia pestis	No ligand	None	<a href="#">1HUF</a>
N-Terminal domain	pseudotuberculosis	No ligand	None	<a href="#">1K46</a>
N-Terminal domain	pseudotuberculosis	No ligand	None	<a href="#">1MOV</a>
Energy-coupling domain	Escherichia coli	An energy-coupling protein from bacteria, IIbcellobiose, with	None	<a href="#">1IIB</a>
LMW-PTP	Bos taurus	Solution structure of a low molecular weight protein tyrosine phosphatase	None	<a href="#">1BVH</a>
PDZ domain of FHL-1	Mouse	Structure, Dynamics and Binding Characteristics of the Sec	None	<a href="#">1GM1</a>
PDZ Domain from FHL-1	Human	C-Terminal Peptide from the Fas Receptor	None	<a href="#">3PDZ</a>
SH3 domain of FHL-1	Mouse	25-residue peptide from the PEST-domain of PEP	None	<a href="#">1JEG</a>
Arsenate reductase	Bacillus Subtilis	Similar to Low Molecular Weight Protein Tyrosine Phosphatase		<a href="#">1JL3</a>
Mkp-3 Erk3 binding domain	Human			<a href="#">1HZM</a>
Pac-1	Human		Active site mutation	<a href="#">1IKZ</a>