

Certificate of Analysis

Product	Tc-PTP, catalytic domain	
Cat No	PP-002-01	
Lot No	1420110	
Description	Purified recombinant human protein tyrosine phosphatase, non-receptor type 2, catalytic domain, expressed in E.coli. N-terminally tagged with GST. Purified by affinity chromatography. M.W. 68.1 KDa Approved HUGO gene symbol: PTPN2 Synonyms: PTPT, TCELLPTP, TCPTP	
Quality	Protein concentration (Bradford with BSA as standard)	0.2 mg/ml
	Purity	> 90 % by SDS PAGE
	Activity	Diluting Tc-PTP 1/5200 in assay buffer will give a rate of 25 Fluorescence Units/minute at pH 7.0, room temperature, using 50uM DIFMUP as substrate. Diluting Tc-PTP 1/200 in assay buffer will give a rate of 0.03 OD/min at pH 7.0, room temperature, using 5mM pNPP as substrate.
Form	Liquid. In 25 mM Hepes, 0.8mM Tris, 50% glycerol, 6mM DTT, 0.17mM glutathione, 0.08mM EDTA, pH 8.0	
Package size	5 microgram	
Storage condition	-80 °C	
Shipment conditions	dry ice	

Material for in vitro research use only. Not for pharmaceutical or drug application. Material does not contain any animal products such as albumin.

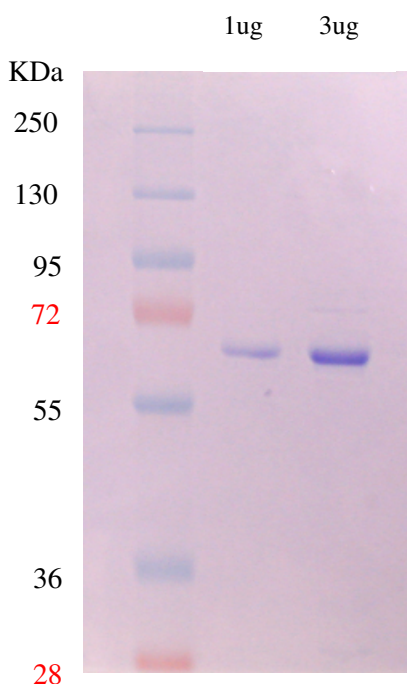
AVOID FREEZE/THAW CYCLES

Amino acid sequence information

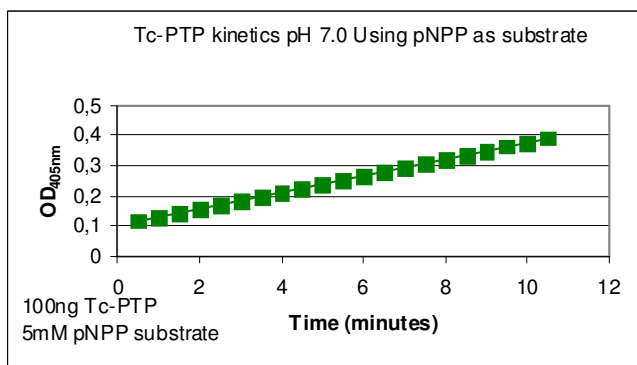
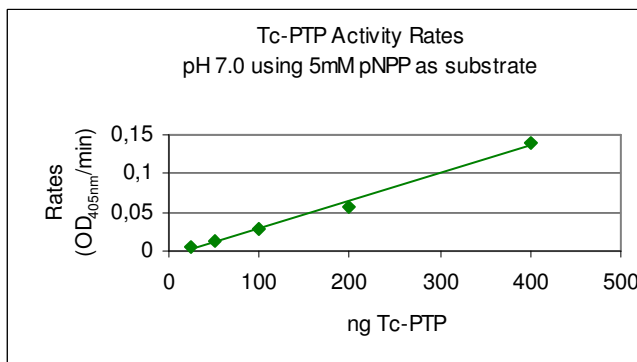
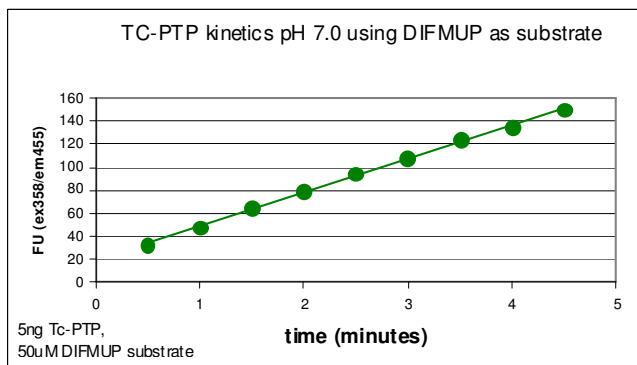
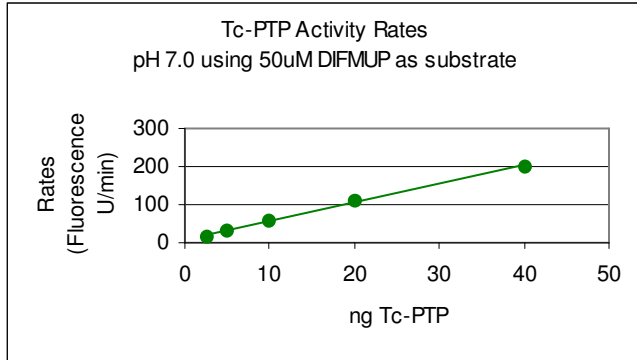
GST-Tc-PTP sequence : thrombin cleavage site in red, kinase site in blue and Tc-PTP sequence (amino acid 1-354, NM_002828) in bold.

MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	50
EFPNLPYYID	GDVKLTQSM	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	100
DIRYGVSRIA	YSKDFETLKV	DFLSKLPPEML	KMFEDRLCHK	TYLNGDHVTH	150
PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	KRIEAIPOID	KYLKSSKYIA	200
WPLQGWQATF	GGGDHPPKSD	LVPRGSRAS	VMPTTIEREF	EELDTQRRWQ	250
PLYLEIRNES	HDYPHRVAKF	PENRNRNRYR	DVSPYDHSRV	KLQNAENDYI	300
NASLVDIEEA	QRSYILTQGP	LPNTCCHFVL	MVWQOKTKAV	VMLNRIVEKE	350
SVKCAQYWPT	DDQEMLFKET	GFSVKLLSED	VKSYYTVHLL	QLENINSGET	400
RTISHFHYTT	WPDFGVPESP	ASFLNFLFKV	RESGSLNPDH	GPAVIHCSAG	450
IGRSGTFSLV	DTCLVLMEKG	DDINIKQVLL	NMRKYRMGLI	QTPDQLRFSY	500
MAIEGAKCI	KGDSSIQKRW	KELSKEDLSP	AFDHSPNKIM	TEKYNGNRIG	550
LEEEKLTGDR	CTGLSSKMQD	TMEENSESAL	RKRIR		585

SDS-PAGE analysis



Activity



In vitro Phosphatase assay in microplate using DIFMUP as substrate

Material:

Assay buffer (AB) : 50mM Hepes, pH7.0, BSA 0.1mg/mL(add fresh) and DTT 3mM (add fresh)
Substrate: DIFMUP, 50uM final
GST-Tc-PTP: final dilution 1/5200 in assay buffer
Black 96 well plate, flat bottom
Plate reader able to measure kinetic fluorescence: Excitation 358nm/emission 455nm

Assay procedure:

- 1.Prepare AB, make enough for 100uL per sample: add DTT + BSA fresh
- 2.Prepare 2X enzyme dilution in AB: will need 50uL per well
- 3.Prepare 2X pNPP dilution: will need 50uL per well
- 4.Plate 50uL enzyme dilution per well in the 96 well plate
- 5.Add 50uL pNPP dilution per well
6. Incubate 1 minute at room temperature
- 7: Monitor fluorescence in plate reader at Excitation 358nm/emission 455nm at 30sec. intervals for 10-15 minutes, room temperature.

In vitro Phosphatase assay in microplate using pNPP as substrate

Material:

Assay buffer (AB): 50mM Hepes, pH7.0, BSA 0.1mg/mL (add fresh) and DTT 3mM (add fresh)
Substrate: pNPP, 5mM final
GST-Tc-PTP: final dilution 1/200 in assay buffer
Clear 96 well plate, flat bottom
Plate reader able to measure kinetic absorbance at 405nm

Assay procedure:

Same assay procedure as for DIFMUP but step 7. Monitor absorbance in plate reader at 405nm at 30sec. intervals for 10-15 minutes, room temperature.