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Produktinformation

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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PRODUCT INFORMATION

PTP1B (human, recombinant)

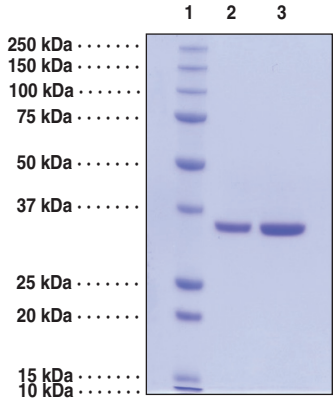
Item No. 10010896

Overview and Properties

Synonyms:	Protein Tyrosine Phosphatase 1B, PTPN1, Tyrosine-protein Phosphatase Non-Receptor Type 1
Source:	Human recombinant PTP1B amino acids 1-321 expressed in *E. coli*
Uniprot No.:	P18031
Molecular Weight:	37.3 kDa
Storage:	-80°C (as supplied); avoid freeze/thaw cycles by aliquoting protein
Stability:	≥1 year
Purity:	≥90% estimated by SDS-PAGE
Supplied in:	100 mM Tris, pH 7.2, with 100 mM sodium chloride, 1 mM EDTA, and 25% glycerol
Protein Concentration:	***batch specific*** mg/ml
Activity:	***batch specific*** U/ml
Specific Activity:	***batch specific*** U/mg
Unit Definition:	One unit of enzyme produces 1 µmol of *p*-nitrophenol/min at 25°C in 100 mM sodium citrate, pH 6.0, containing 10 mM *p*-nitrophenyl phosphate.

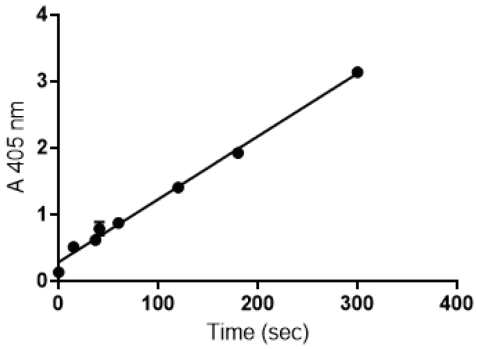
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Images



Lane 1: MW Markers
Lane 2: PTP1b (2 µg)
Lane 3: PTP1b (4 µg)

Representative gel image shown; actual purity may vary between each batch.



Activity of PTP1b. PTP1b activity was determined using using 300 ng PTP1b and 10 mM pNPP at 25°C in 100 mM sodium citrate, pH 6.0

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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PRODUCT INFORMATION

Description

Protein tyrosine phosphatase (PTPs) are an enzyme superfamily that includes about 100 human proteins.[1] Their function is to remove phosphate from tyrosine residues of cellular proteins.[2] Reversible phosphorylation catalyzed by the coordinated actions of protein tyrosine kinases and phosphatases is of paramount importance to the regulation of the signaling events that underlie such fundamental processes as growth and proliferation, differentiation, and survival or apoptosis, as well as adhesion and motility.[3] One of the most heavily studied PTP proteins is PTP1B. Data suggests PTP1B is a negative regulator in both insulin and leptin signaling.[3] As such, PTP1B has become a leading diabetes drug target.[1]

Cayman's PTP1B is expressed and purified from *E. coli*. The purity was determined using gel electrophoresis followed by coomassie staining. PTP1B specific activity was established using *p*NPP as a substrate and measuring absorbance of *p*-nitrophenol formation at 405 nm.

References

1. Bishop, A.C., Zhang, X.-Y., and Lone, A.M. Generation of inhibitor-sensitive protein tyrosine phosphatases *via* active-site mutations. *Methods* **42(3)**, 278-288 (2007).
2. Peters, G.H., Branner, S., Møller, K.B., *et al.* Enzyme kinetic characterization of protein tyrosine phosphatases. *Biochimie* **85(5)**, 527-534 (2003).
3. Zhang, S. and Zhang, Z.Y. PTP1B as a drug target: recent developments in PTP1B inhibitor discovery. *Drug Discov. Today* **12(9-10)**, 373-381 (2007).

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