PPM1A Protein, Mouse (His)

Cat. No.:	HY-P75979
Synonyms:	Protein Phosphatase 1A; Protein Phosphatase 2C Isoform Alpha; PP2C-Alpha; PPPM1A
Species:	Mouse
Source:	E. coli
Accession:	P49443 (M1-W382)
Gene ID:	19042
Molecular Weight:	Approximately 44 kDa

PROPERTIES

AA Sequence	M G A F L D K P K M E K H N A Q G Q G N G L R Y G L S S M Q G W R V E M E D A H T A V I G L P S G L E T W S F F A V Y D G H A G S Q V A K Y C C E H L L D H I T N N Q D F R G S A G A P S V E N V K N G I R T G F L E I D E H M R V M S E K K H G A D R S G S T A V G V L I S P Q H T Y F I N C G D S R G L L C R N R K V H F F T Q D H K P S N P L E K E R I Q N A G G S V M I Q R V N G S L A V S R A L G D F D Y K C V H G K G P T E Q L V S P E P E V H D I E R S E E D D Q F I I L A C D G I W D V M G N E E L C D F V R S R L E V T D D L E K V C N E V V D T C L Y K G S R D N M S V I L I C F P S A P K V S A E A V K K E A E L D K Y L E S R V E E I I K K Q V E G V P D L V H V M R T L A S E N I P S L P P G G E L A S K R N V I E A V Y N R L N P Y K N D D T D S A S T D D M W
Biological Activity	Measured by its ability to dephosphorylate the peptide substrate, DLDVPIPGRFDRRVS(PO3)VAAE. The specific activity is 450.99 nmol/min/mg, as measured under the described conditions.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Protein Phosphatase, Mg2+/Mn2+ Dependent 1A (PPM1A) is an enzyme characterized by its broad specificity. It functions as a negative regulator of TGF-beta signaling by dephosphorylating SMAD2 and SMAD3, leading to their dissociation from SMAD4 and subsequent nuclear export. This enzymatic activity ultimately terminates the TGF-beta-mediated signaling pathway. Additionally, PPM1A dephosphorylates PRKAA1 and PRKAA2, contributing to the regulation of cellular processes associated with AMP-activated protein kinase. Furthermore, PPM1A plays a crucial role in the termination of TNF-alpha-mediated NF-kappa-B activation by dephosphorylating and inactivating IKBKB/IKKB. The diverse substrate specificity of PPM1A underscores its importance in modulating key signaling pathways, highlighting its regulatory functions in cellular responses to TGF-beta and TNF-alpha signaling (

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA