

QPCT Protein, Mouse (HEK293, His)

Cat. No.:	HY-P71670
Synonyms:	Qpct; Glutaminyl-peptide cyclotransferase; EC 2.3.2.5; Glutaminyl cyclase; QC; Glutaminyl-tRNA cyclotransferase
Species:	Mouse
Source:	HEK293
Accession:	Q9CYK2 (36A-362L)
Gene ID:	70536
Molecular Weight:	Approximately 41.6 kDa

PROPERTIES

AA Sequence	<pre> AWTQEKNHHQ PAHLNSSSLQ QVAEGTSE MWQNDLRPLL IERYPGSPGS YSARQHIMQR IQRLQAEWVV EVDTFLSRTP YGYRSFSNII STLNPEAKRH LVLACHYDSK YFPRWDSRVF VGATDSAVPC AMMLELARAL DKKLHSLKDV SGSKPDLSLR LIFFDGEEAF HHWSPQDSL Y GSRHLAQKMA SSPHPPGSRG TNQLDGMDDL VLLDLIGAAN PTFPNFFPKT TRWFNRLQAI EKELYELGLL KDHSLEKRYF QNFGYGNIIQ DDHIPFLRKG VPVLHLIASP FPEVWHTMDD NEENLHASTI DNLNKIIQVF VLEYLHL </pre>
Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized after extensive dialysis against solution in 20 mM Tris-HCl, 0.5 M NaCl, 6% Trehalose, pH 8.0.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH ₂ O.
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	The QPCT protein plays a pivotal role in the biosynthesis of pyroglutamyl peptides, exhibiting a preference for substrates with an N-terminal glutaminyl residue while displaying a bias against adjacent acidic and tryptophan residues. Notably, its
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substrate specificity is more pronounced for the residues proximal to the N-terminal glutamyl residue, showing a distinctive substrate recognition pattern. Additionally, QPCT demonstrates a lack of significant dependence on chain length beyond the second residue, suggesting that the protein's catalytic activity is less influenced by elongation beyond this point. This selectivity and flexibility in substrate recognition highlight QPCT's significance in the precise biosynthesis of pyroglutamyl peptides, contributing to the diverse array of peptides with pyroglutamylated N-termini in various biological contexts.

Caution: Product has not been fully validated for medical applications. For research use only.

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