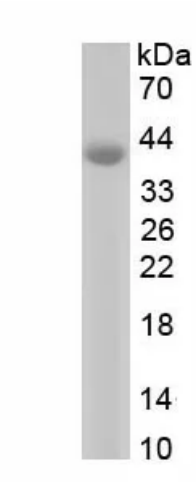
Active Glutaminyl Peptide Cyclotransferase (QPCT)

Catalog#:PEH12969

概述（Summary）

别称（Alternative Names）	GCT; QC; EC; Glutaminyl Cyclase; Glutaminyl-tRNA cyclotransferase
纯度（Purity）	Greater than 90% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Val29-Leu361】
Accession #	Q16769
表达宿主（Host）	E.coli
种属（Species）	Homo sapiens (Human)
预测分子量（Predicted MW）	41.6 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Responsible for the biosynthesis of pyroglutamyl peptides. Has a bias against acidic and tryptophan residues adjacent to the N-terminal glutaminyl residue and a lack of importance of chain length after the second residue. Also catalyzes N-terminal pyroglutamate formation. In vitro, catalyzes pyroglutamate formation of N-terminally truncated form of APP amyloid-beta peptides [Glu-3]-amyloid-beta. May be involved in the N-terminal pyroglutamate formation of several amyloid-related plaque-forming peptides.

电泳图（SDS-PAGE image）



Greater than 90% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

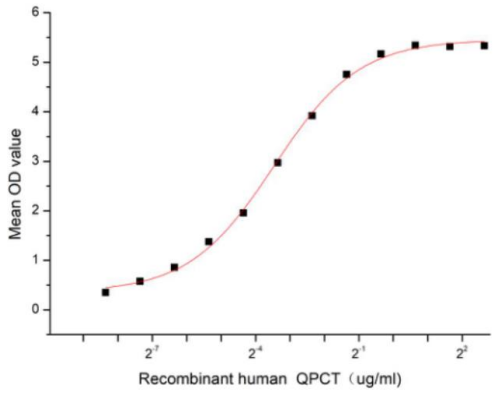


Figure 1. The binding activity of recombinant human QPCT and recombinant rat CTSB

Glutaminyl Peptide Cyclotransferase (QPCT), also known as Glutaminyl Cyclase, is an enzyme responsible for the biosynthesis of pyroglutamyl peptides. QPCT is present in the pituitary and adrenal glands, where it is important for the generation of the N terminal pyroglutamyl groups of peptide hormones such as neurotensin and thyrotropin-releasing hormone. Besides, Cathepsin B (CTSB) has been identified as an interactor of QPCT, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human QPCT and recombinant rat CTSB. Briefly, QPCT was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl were then transferred to CTSB-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-QPCT pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37℃, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50 µL stop solution to the wells and read at 450/630 nm immediately. The binding activity of recombinant human QPCT and recombinant rat CTSB was shown in Figure 1, the EC50 for this effect is 0.09 ug/mL.

注意事项（Note）

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