

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Glutaminyl-peptide Cyclotransferase/QPCT in direct ELISAs.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human Glutaminyl-peptide Cyclotransferase/QPCT Ala33-Leu361 Accession # Q16769
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

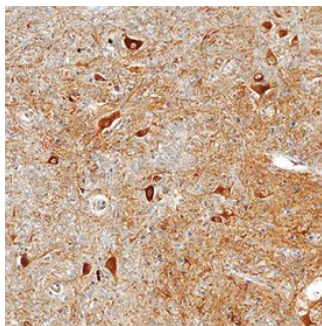
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Immunohistochemistry	5-15 µg/mL	See Below

DATA

Immunohistochemistry



Glutaminyl-peptide Cyclotransferase/QPCT in Human Brain.
Glutaminyl-peptide Cyclotransferase/QPCT was detected in immersion fixed paraffin-embedded sections of human brain using Sheep Anti-Human Glutaminyl-peptide Cyclotransferase/QPCT Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6368) at 3 µg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). Specific staining was localized to neuronal cell bodies and processes. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Glutaminyl-peptide Cyclotransferase, also known as Glutaminyl Cyclase, catalyzes the conversion of N-terminal L-glutaminyl residues of peptides to pyroglutamyl groups (1). The enzyme 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. Glutaminyl Cyclase also catalyzes the conversion of N-terminal L-glutamyl residues to pyroglutamyl residues (2). This activity may contribute to the formation of several amyloid-related plaque forming peptides, contributing to Alzheimer's disease pathology. Glutaminyl Cyclase is also considered to be a diagnostic marker of thyroid tumors (3).

References:

1. Busby, W.H. Jr. *et al.* (1987) *J. Biol. Chem.* **262**:8532.
2. Schilling, S. *et al.* (2004) *FEBS Lett.* **563**:191.
3. Griffith, O.L. *et al.* (2006) *J. Clin. Oncol.* **24**:5043.