10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# GGCX Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP11117c

## Product Information

| | |
|---|---|
| **Application** | WB, IHC-P, E |
| **Primary Accession** | P38435 |
| **Other Accession** | O88496, NP_000812.2 |
| **Reactivity** | Human |
| **Predicted** | Rat, Mouse, Bovine, Canine, Rabbit |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Isotype** | Rabbit IgG |
| **Clone Names** | RB19281 |
| **Calculated MW** | 87561 |
| **Antigen Region** | 548-578 |

## Additional Information

| | |
|---|---|
| **Gene ID** | 2677 |
| **Other Names** | Vitamin K-dependent gamma-carboxylase, Gamma-glutamyl carboxylase, Peptidyl-glutamate 4-carboxylase, Vitamin K gamma glutamyl carboxylase, GGCX, GC |
| **Target/Specificity** | This GGCX antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 548-578 amino acids from the Central region of human GGCX. |
| **Dilution** | WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration. |
| **Format** | Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification. |
| **Storage** | Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles. |
| **Precautions** | GGCX Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

| | |
|---|---|
| **Name** | GGCX |
| **Synonyms** | GC |

| | |
|---|---|
| **Function** | Mediates the vitamin K-dependent carboxylation of glutamate residues to calcium-binding gamma-carboxyglutamate (Gla) residues with the concomitant epoxidation of vitamin K hydroquinone to vitamin K epoxide (PubMed:17073445, PubMed:39880952, PubMed:39880037). Couples epoxidation and carboxylation in the same active site (PubMed:39880952, PubMed:39880037). Catalyzes gamma-carboxylation of blood coagulation factors (F2, F7, F9 and F10) and anticoagulants such as PROC, which are essential for thrombosis(PubMed:17073445, PubMed:39880037). Catalyzes gamma-carboxylation of osteocalcin/BGLAP, which is essential for bone metabolism (PubMed:17073445, PubMed:39880952). Catalyzes gamma-carboxylation of matrix Gla protein (MGP) and other transmembrane gamma-Gla proteins such as PRRG2, which are essential for calcium homeostasis and haemostasis (PubMed:17073445, PubMed:39880037). |
| **Cellular Location** | Endoplasmic reticulum membrane; Multi-pass membrane protein |

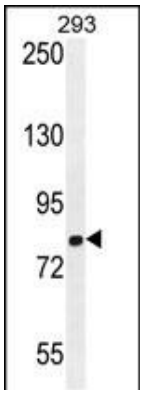
## Background

This gene encodes an enzyme which catalyzes the posttranslational modification of vitamin K-dependent protein. Many of these vitamin K-dependent proteins are involved in coagulation so the function of the encoded enzyme is essential for hemostasis. Mutations in this gene are associated with vitamin K-dependent coagulation defect and PXE-like disorder with multiple coagulation factor deficiency. Multiple transcript variants encoding different isoforms have been found for this gene.

## References

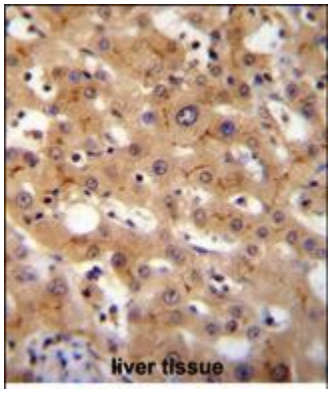

Higgins-Gruber, S.L., et al. J. Biol. Chem. 285(41):31502-31508(2010)
King, C.R., et al. Thromb. Haemost. 104(4):750-754(2010)
Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)
Ikejiri, M., et al. Int. J. Hematol. 92(2):302-305(2010)
Schelleman, H., et al. Br J Clin Pharmacol 70(3):393-399(2010)


## Images




GGCX Antibody (Center) (Cat. #AP11117c) western blot analysis in 293 cell line lysates (35ug/lane).This demonstrates the GGCX antibody detected the GGCX protein (arrow).

GGCX Antibody (Center) (Cat. #AP11117c)immunohistochemistry analysis in formalin fixed and paraffin embedded human liver tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of GGCX Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.




Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.