Datasheet for ABIN2747830

GGCX Protein

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Overview

Quantity:	5 applications
Target:	GGCX
Origin:	Human, Mouse, Rat
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Application:	Western Blotting (WB), Positive Control (PC)

Product Details

Purpose:	Purified Protein in ready-to-use SDS sample buffer.
Purification:	Purified Protein

Target Details

Target:	GGCX
Alternative Name:	GGCX (GGCX Products)
Background:	GGCX is a multi-pass membrane protein, localized to the membrane of the endoplasmic reticulum. It exists as a monomer and, via its ability to modify glutamate residues, it accomplishes the post-translational changes that are necessary for the activity of all vitamin K-dependent proteins (such as blood coagulation and bone matrix proteins). Vitamin K-dependent Gamma-Carboxylase (GGCX) is an enzyme which catalyzes the posttranslational modification of glutamate residues to calcium-binding gamma-carboxyglutamate (Gla) in its substrates, the vitamin K-dependent proteins (VKDPs). This modification is required for the functional activity of coagulation proteins such as factors VII, IX, X, and prothrombin. The VKDPs play an

Target Details

	important role as signaling molecules in the regulation of cell growth, adhesion, and apoptosis. The modification is carried out by a system of integral proteins of the endoplasmic reticulum (ER) membrane where the warfarin sensitive vitamin K 2, 3-epoxide reductase (VKOR) produces the reduced hydroquinone form of vitamin K (vit.KH2) needed by the gamma-carboxylase as the active cofactor. 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 clotting factor 1 (VKCFD1) defect and Pseudoxanthoma Elasticum, PXE-like disorder with multiple coagulation factor deficiency, both of which are characterized by abnormal skin, blood or bone function. This gene encodes a vitamin K-dependent plasma protein that functions as a cofactor for the anticoagulant protease, activated protein C (APC) to inhibit blood coagulation. It is found in plasma in both a free, functionally active form and also in an inactive form complex with C4b-binding protein. Mutations in this gene result in autosomal dominant hereditary thrombophilia. An inactive pseudo gene of this locus is located at an adjacent region on chromosome 3. The modification has a wide range of physiological implications, including hemostasis, bone calcification, and signal transduction. This enzyme interacts with a high affinity gamma-carboxylation recognition sequence (gamma-CRS) of the substrate and carries out multiple modifications of the substrate before the product is released. The human GGCX gene maps to chromosome 2 at 2p12 and encodes a 758 amino acid protein.
Molecular Weight:	91 kDa
UniProt:	P38435
Pathways:	SARS-CoV-2 Protein Interactome

Application Details

Application Notes:	The sample is in ready-to-use buffer for application in SDS-PAGE and Western blotting.
Comment:	Synonyms: Vitamin K-dependent gamma-carboxylase, GGCX, GC, VKCFD1
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	For 5 applications, volume varies from 100-200 µL in reduced SDS-PAGE sample buffer.
Storage:	-20 °C

Handling

Storage Comment:	-20 °C for long term storage