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Datasheet for 600-401-GU3

xCT Antibody

Overview

Description:	Anti-xCT (RABBIT) Antibody - 600-401-GU3
Item No.:	600-401-GU3
Size:	100 µg
Applications:	ELISA, FC, IF, WB
Reactivity:	Human
Host Species:	Rabbit

Product Details

Background:	xCT belongs to the amino acid-polyamine-organocation (APC) superfamily and L-type amino acid transporter (LAT) family. xCT gene encodes a member of a heteromeric, sodium-independent, anionic amino acid transport system that is highly specific for cysteine and glutamate. In this system, designated Xc(-), the anionic form of cysteine is transported in exchange for glutamate. Increased expression of this gene results in neuronal cell death. xCT may be associated with kaposi sarcoma, dyscalculia, cystinuria, spondylolsis, and anemia of prematurity. Anti-xCT Antibody is useful for researchers interested in Cancer Research, Glucose/Energy Metabolism Research, and Cell Surface Protein Interaction Research.
Synonyms:	rabbit anti-xCT antibody, SLC7A11, Cystine/glutamate transporter, Amino acid transport system xc-, Calcium channel blocker resistance protein CCBR1, Solute carrier family 7 member 11
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	SLC7A11
Reactivity:	Human
Immunogen Type:	Conjugated Peptide

Immunogen:	Anti-xCT antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to an internal portion of human xCT conjugated to Keyhole Limpet Hemocyanin (KLH).
Purity/Specificity:	This affinity purified antibody is directed against human xCT. This product was affinity purified from monospecific antiserum by immunoaffinity purification. Blast analysis of the sequence of the immunogen shows 100% identity with human and orangutan, and 88% identity to mouse.
Relevant Links:	• UniProtKB - Q9UPY5 • NCBI - NP_055146.1 • GeneID - 23657

Application Details

Tested Applications:	ELISA, FC, IF, WB
Application Note:	Anti-xCT Antibody has been tested in Western Blot, ELISA, Immunofluorescence and Flow cytometry. Expect a band at 55.4 kDa in western blot using appropriate lysates. Positive control used NIH-3T3, Hela, HCT-116, A549, or PC3 whole cell lysates at 0.1-1.0µg/mL for WB, breast carcinoma cells for Flow, and PC3 with MeOH at 10µg/mL in IF. Although not tested, this antibody is likely functional in immunohistochemistry and immunoprecipitation.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	5.0 ug/ml
FC:	1:200
IF:	10 ug/ml
IHC:	1:200
IP:	User Optimized
WB:	1:1000

Formulation

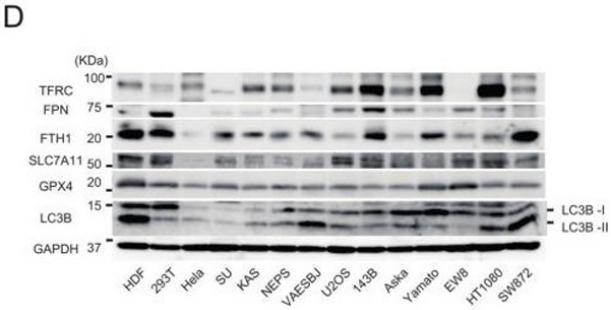
Physical State:	Liquid (sterile filtered)
Concentration:	1.02 mg/ml by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide

Stabilizer:	None

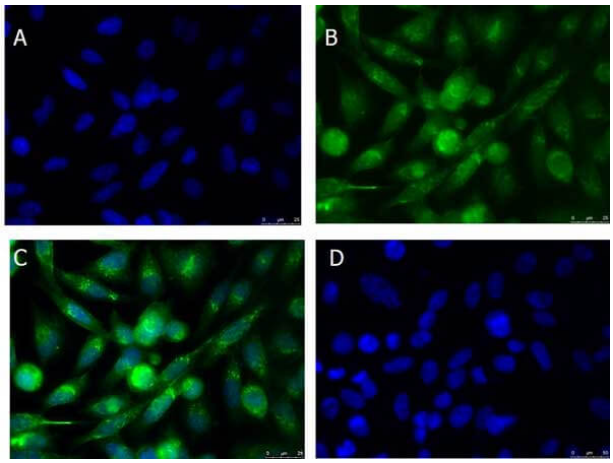
Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

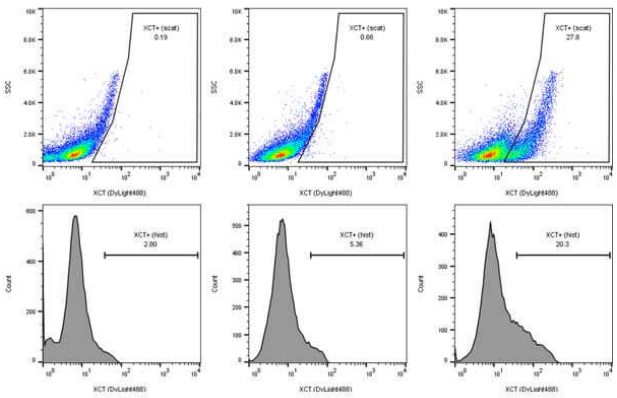
Images



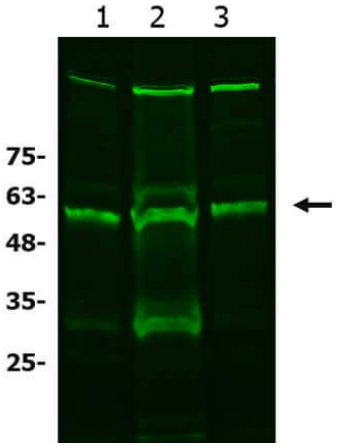
Western Blot
(D) Immunoblot analyses of the expression levels of ferroptosis-related proteins (TFRC, FPN, FTH1, SLC7A11, GPX4, and LC3B) in the indicated cell lines. Fig 1.
PMID: 37444594



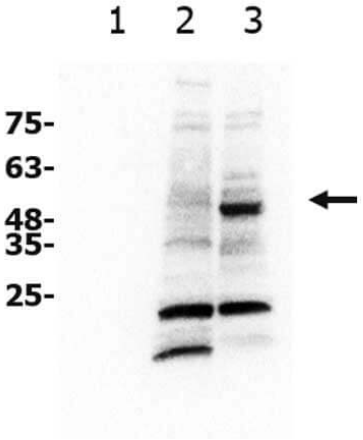
Immunofluorescence Microscopy
Immunofluorescence Microscopy of Rabbit anti-xCT antibody. Tissue: PC3 cells. Fixation: 100% MeOH. Antigen retrieval: not required. Primary antibody: xCT antibody at 10 µg/mL overnight at 4°C. Secondary antibody: Donkey Anti-Rabbit IgG DyLight™ 488 (p/n 611-741-127) at 5 ug/ml for 2 h at RT. Localization: xCT is localized on the cell membrane and vesicles. Staining: xCT as green fluorescent signal with DAPI (blue) nuclear counterstain.



Flow Cytometry
Flow Cytometry of rabbit anti-xCT antibody. Cells: breast carcinoma cells Primary antibody: xCT antibody at 1.0 µg/mL for one hour at 4°C. Secondary antibody: Donkey anti-Rabbit IgG Dylight™488 Antibody p/n (611-741-127) at 1 ug/ml in 200 ul for one hour on ice.



Western Blot
Western Blot of Rabbit anti-xCT antibody. Lane 1: A549 WCL (p/n W09-001-372). Lane 2: HCT-116 WCL (p/n W09-001-GM4). Lane 3: HeLa WCL (p/n W09-000-364). Load: 10 µg per lane. Primary antibody: xCT antibody at 1:1000 for overnight at 4°C. Secondary antibody: donkey anti-rabbit secondary DyLight™488 antibody (p/n 611-741-127) at 1:20,000 for one hour at RT. Block: BlockOut blocking buffer (p/n MB-073) one hour at RT. Predicted/Observed size: 56 kda. Other band(s): xCT processing caused by dimerization, glycosylation, and/or phosphorylation.



Western Blot
Western Blot of Rabbit anti-xCT antibody. Lane 1: recombinant BCL3 (unrelated negative control). Lane 2: NIH 3T3 WCL (p/n W10-000-358). Lane 3: A549 WCL (p/n W09-001-372). Load: 10 µg per lane. Primary antibody: xCT antibody at 1:1000 for overnight at 4°C. Secondary antibody: goat anti-rabbit secondary HRP antibody (p/n 611-103-122) at 1:20,000 for one hour at RT. Block: 5% BSA blocking buffer one hour at RT. Predicted/Observed size: 56 kda. Other band(s): xCT processing caused by dimerization, glycosylation, and/or phosphorylation.

References

- Tamiya H et al. SHARPIN Enhances Ferroptosis in Synovial Sarcoma Cells via NF-κB- and PRMT5-Mediated PGC1α Reduction. *Cancers (Basel).* (2023)

Disclaimer

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