

Datasheet for 600-401-GU3S**xCT Antibody****Overview**

Description:	Anti-xCT (RABBIT) Antibody - 600-401-GU3S
Item No.:	600-401-GU3S
Size:	25 µL
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, spondylolysis, 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 HeLa, NIH-3T3, A549, HCT-116, 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 µg/mL

FC: 1:200

IF: 10 µg/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

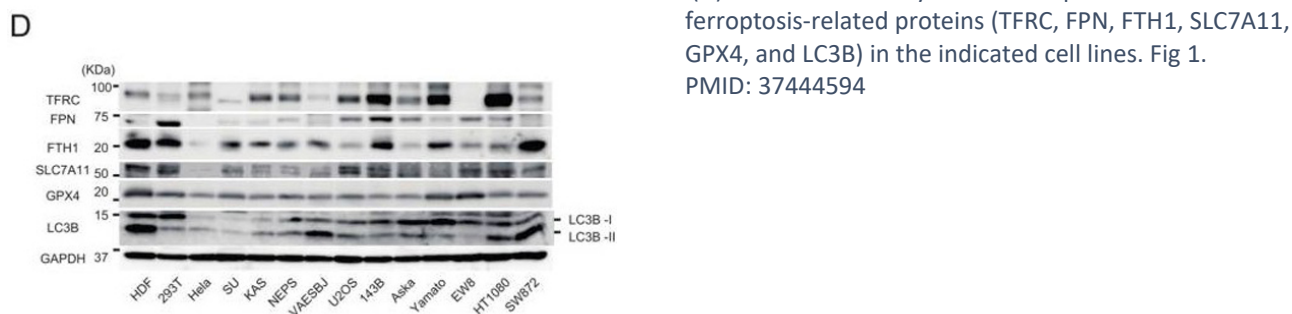
Shipping & Handling

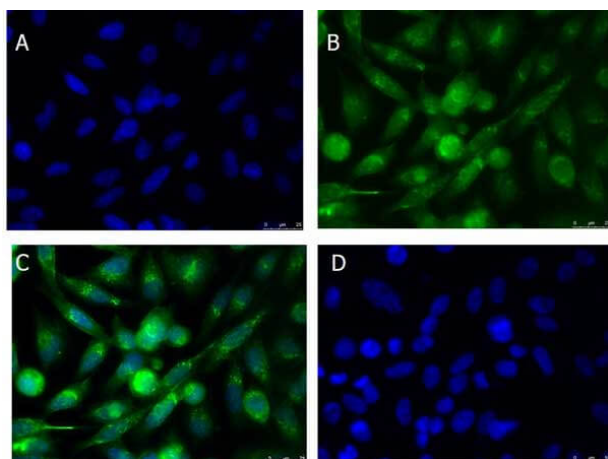
Shipping Condition: Dry Ice

Storage Condition: Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.

Expiration: Expiration date is one (1) year from date of receipt.

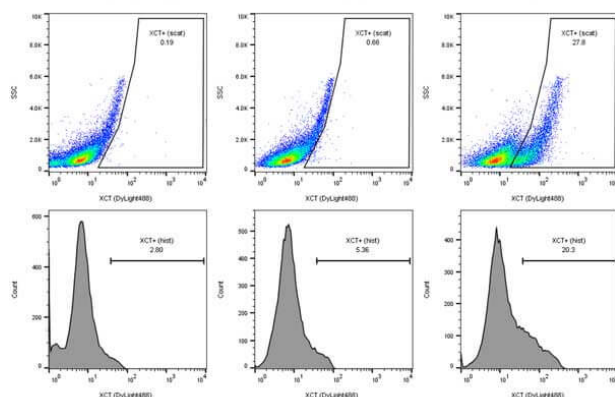
Images





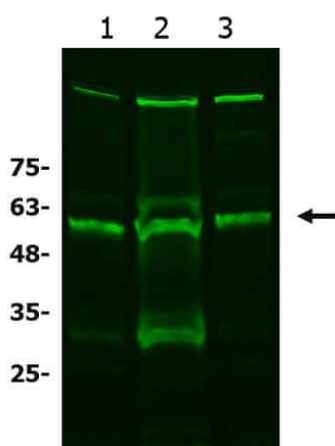
Immunofluorescence Microscopy

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 µg/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.



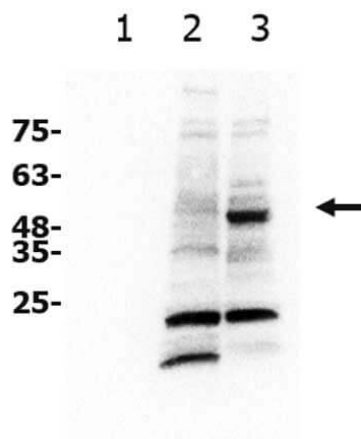
Flow Cytometry

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 µg/ml in 200 µl 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

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.