OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for TA336629

xCT (SLC7A11) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	FC, ICC/IF, IHC, Immunoblotting, Simple Western, WB
Recommended Dilution:	Simple Western, Immunohistochemistry: 1:200, Immunohistochemistry-Paraffin: 1:200, Western Blot: 0.5-2 ug/ml, Flow Cytometry: 1 - 5 ug/ml, Immunocytochemistry/ Immunofluorescence: 1:100 - 1:1000, Immunohistochemistry-Frozen: 1:10-1:500, Immunoblotting
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	A synthetic peptide made to a region within the N-terminus of the mouse xCT protein (between residues 1-50). [UniProt# Q9WTR6]
Formulation:	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Concentration:	lot specific
Purification:	Immunogen affinity purified
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	55 kDa
Gene Name:	solute carrier family 7 member 11
Database Link:	NP_055146 Entrez Gene 23657 Human Q9UPY5

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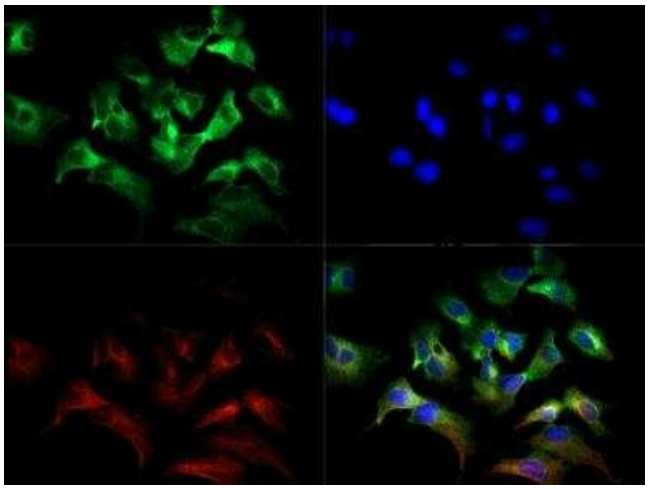
Background: System xc- is a cystine-glutamate exchange transporter that is composed of a light-chain subunit (xCT, SLC7A11) as well as a heavy-chain subunit (CD98hc, SLC3A2), and the xCT expression levels correlate with system xc-activity. SLC7A11 gene encodes xCT which is a multipass membrane protein with 12 transmembrane domains having both termini located intracellularly. xCT is widely expressed in various tissues and exert multiple roles such as pheomelanin production, cellular proliferation/metastasis, Kaposi's sarcoma herpesvirus (KSHV) entry into the host cells, learning and memory. Because cystine absorbed by cells via system xc- is rapidly reduced to cysteine for incorporation into GSH, the cell surface xCT expression is considered an important determinant of intracellular redox balance. Most cells require little cystine uptake to sustain cellular protein biosynthesis and GSH production, however this is different in cancer cells which generate high ROS levels via enhanced metabolism and require high GSH levels to survive oxidative stress. Accordingly, xCT is expressed at high levels in various malignant tumors including leukemias, lymphomas, Karposi's sarcoma, pancreatic cancer, and brain cancer.

Synonyms: CCBR1; xCT

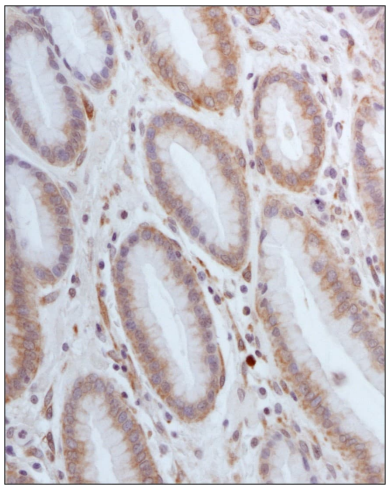
Note: This xCT antibody is useful for Immunocytochemistry/Immunofluorescence and Western blot. In Western blot a band is observed at ~55 kDa; in ICC/IF membrane and ER staining was visualized in HepG2 cells.

Protein Families: Druggable Genome, Transmembrane

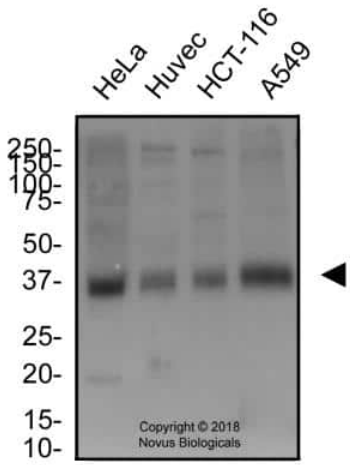
Product images:



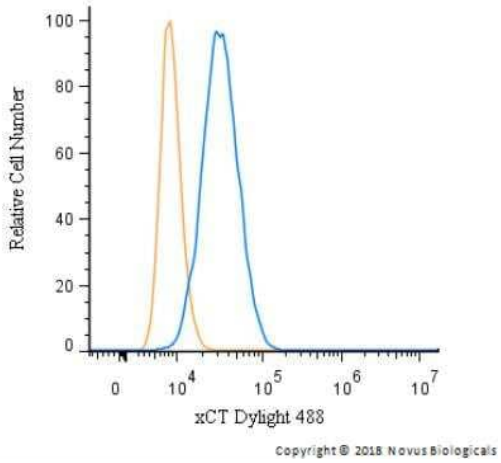
Immunocytochemistry/Immunofluorescence: xCT Antibody TA336629 - xCT antibody was tested in HepG2 cells with DyLight 488 (green). Nuclei and alpha-tubulin were counterstained with DAPI (blue) and DyLight 550 (red).



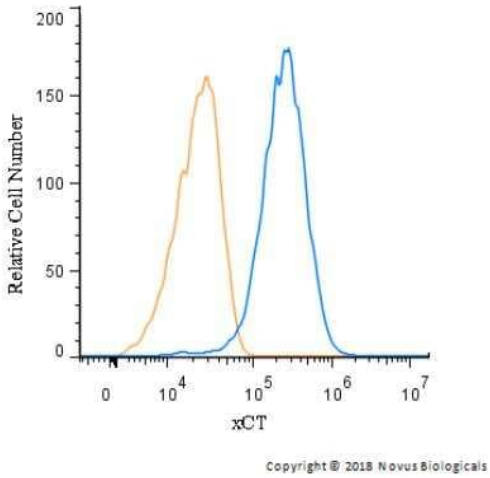
Analysis of a FFPE tissue section of human stomach using 1:200 dilution of xCT antibody. The staining was developed using HRP labeled anti-rabbit secondary antibody and DAB reagent, and nuclei of cells were counter-stained with hematoxylin.



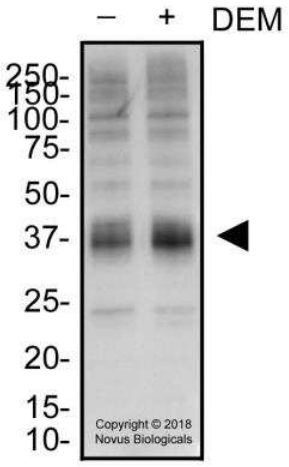
Western Blot: xCT Antibody TA336629 - Total protein from human HeLa, Huvec, HCT-116 and A549 cells was separated on a 12% gel by SDS-PAGE, transferred to PVDF membrane and blocked in 5% non-fat milk in TBST. The membrane was probed with 2.0 ug/ml anti-xCT in block buffer and detected with an anti-rabbit HRP secondary antibody using chemiluminescence.



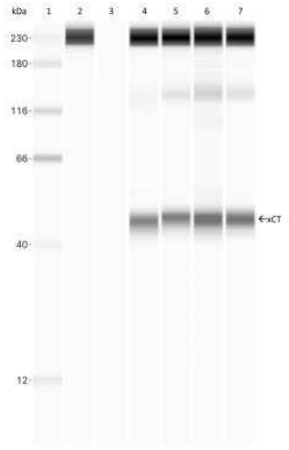
Flow Cytometry: xCT Antibody TA336629 - An intracellular stain was performed on HeLa cells with [TA336629G] (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 5 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to DyLight 488.



Flow Cytometry: xCT Antibody TA336629 - An intracellular stain was performed on HeLa with TA336629 and a matched isotype control. Cells were fixed with 4% PFA and then permeablized with 0.1% saponin. Cells were incubated in an antibody dilution of 2.5 ug/mL for 30 minutes at room temperature, followed by Rabbit IgG APC-conjugated Secondary Antibody (F0111, R&D Systems).



Western Blot: xCT Antibody TA336629 - Total protein from Human HeLa cells treated with and without 0.1 mM Diethyl Maleate for 24 hours was separated on a 12% gel by SDS-PAGE, transferred to PVDF membrane and blocked in 5% non-fat milk in TBST. The membrane was probed with 2.0 ug/ml anti-xCT in 1% non-fat milk in TBST and detected with an anti-rabbit HRP secondary antibody using chemiluminescence. Note the increase in xCT expression with treatment.



Simple Western: xCT Antibody TA336629 - (1) ladder, (2) no lysate + xCT, 100ug/ml, (3) human brain frontal cortex membrane lysate,no primary antibody, (4-7) human brain lysates, 0.03mg/ml, xCT, 100ug/ml.