

Product datasheet for **TA301518**

xCT (SLC7A11) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	FC, ICC/IF, IHC, IP, WB
Recommended Dilution:	Simple Western: 10 ug/ml, Western Blot: 1:1000, Immunocytochemistry/ Immunofluorescence: 1:100-1:1000, Immunohistochemistry-Paraffin: 5 ug/ml, Immunohistochemistry: 5 u/gml, Immunoprecipitation (Negative), Flow Cytometry: 2-3ug/ml, Dual RNAscope ISH-IHC
Reactivity:	Human, Mouse
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	A synthetic peptide made to a region within the N-terminus of the human XCT protein sequence (between residues 1-50).
Formulation:	Tris-glycine with 150mM NaCl and 0.05% sodium azide
Purification:	Immunogen affinity purified
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	solute carrier family 7 member 11
Database Link:	NP_055146 Entrez Gene 26570 Mouse Entrez Gene 23657 Human Q9UPY5



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Background:

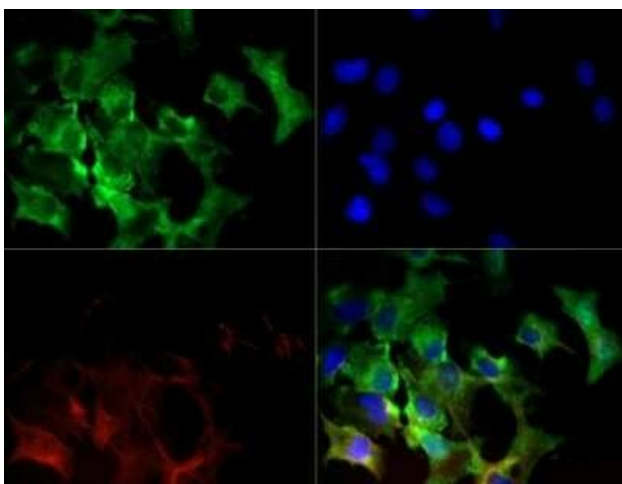
Mammalian amino acid transport systems consist of a large variety of transporters. The amino acid transporter, cystine/glutamic acid transporter xCT, for system xc has been proposed to be responsible for the cystine transport through the plasma membrane. System xc mediates an amino acid exchange and prefers cystine and glutamate as its substrates. The transporter designated as xCT requires 4F2 heavy chain (4F2hc:CD98) for its functional expression, and belongs to the family of amino acid transporters that associates with the type II membrane glycoproteins such as 4F2hc. In brain, it has been proposed that system xc is up-regulated in glial cells upon oxidative stress and plays an essential roles to protect neurons against oxidative stress. Recent studies have implicated xCT as a gateway that Kaposi's sarcoma herpesvirus (KSHV) uses to enter cells.

Synonyms:

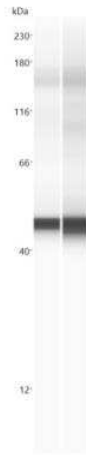
CCBR1; xCT

Protein Families:

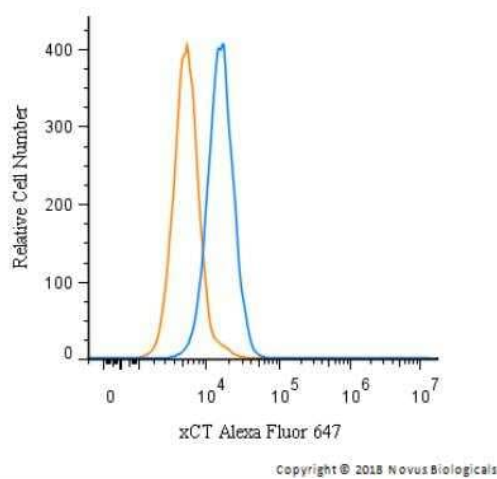
Druggable Genome, Transmembrane

Product images:


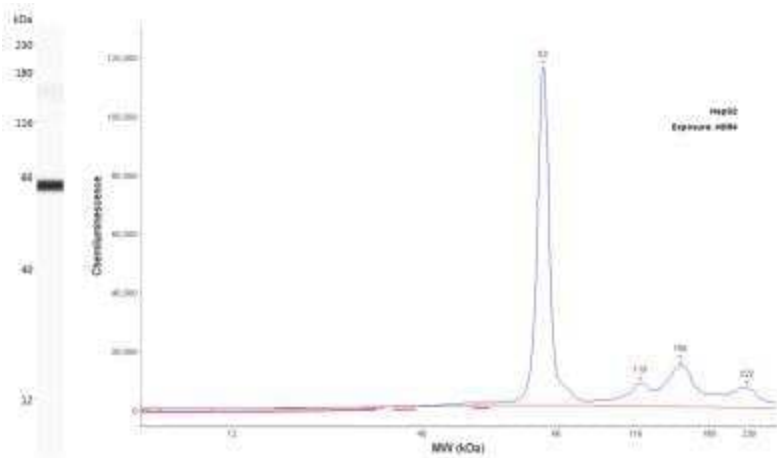
Immunocytochemistry/Immunofluorescence: xCT Antibody TA301518 - xCT antibody was tested in HepG2 cells with DyLight 488 (green). Nuclei and alpha-tubulin were counterstained with DAPI (blue) and DyLight 550 (red).



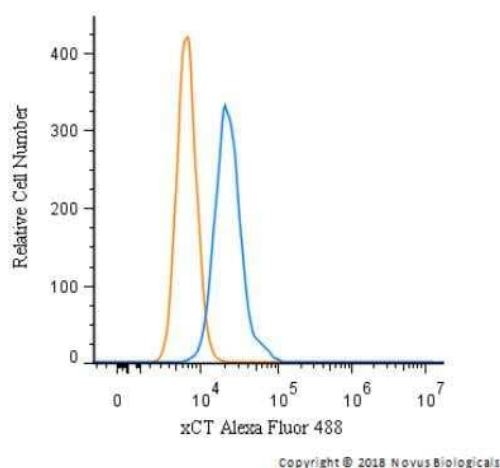
Simple Western: xCT Antibody TA301518 - Simple Western lane view shows a specific band for xCT using TA301518 at 25 ug/ml in HeLa and HeLa + DEM cell lysates. This experiment was performed under reducing conditions using the 12-230 kDa separation system.



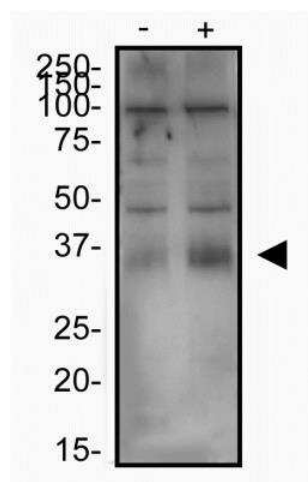
Flow Cytometry: xCT Antibody TA301518 - An intracellular stain was performed on HeLa cells with TA301518AF647 (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 2.5 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to Alexa Fluor 647.



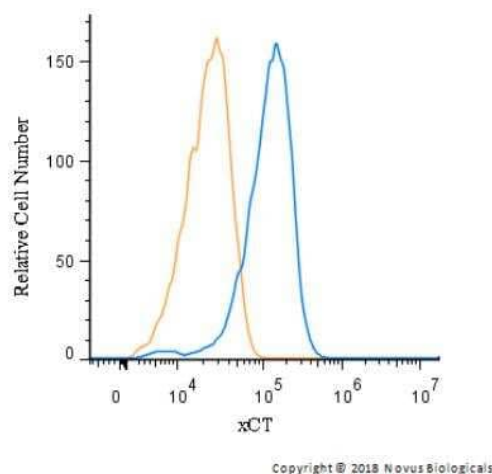
Simple Western: xCT Antibody TA301518 - Simple Western lane view shows a specific band for xCT using TA301518 at 25 ug/mL in HepG2 cell lysates and antibody at 25 ug/mL. Electropherogram image of corresponding Simple Western lane view at WES molecular weight of 63 kDa. Image reported by internal validation.



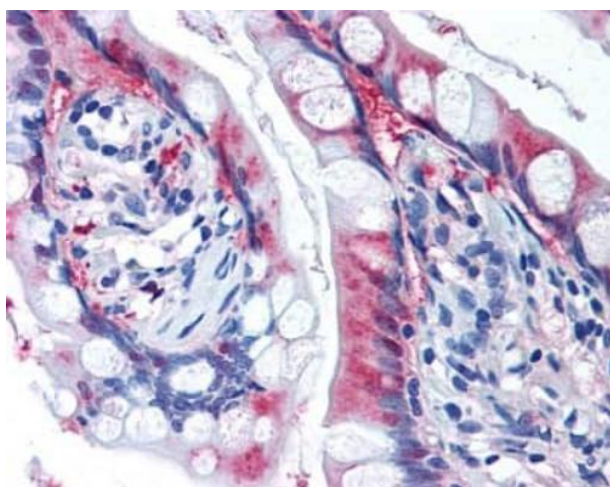
Flow Cytometry: xCT Antibody TA301518 - An intracellular stain was performed on HeLa cells with xCT Antibody TA301518AF488 (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 5 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to Alexa Fluor 488.



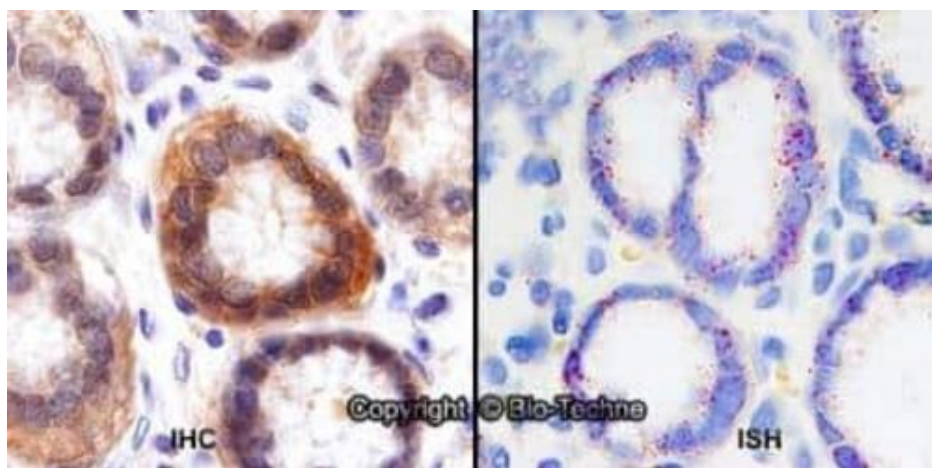
Western Blot: xCT Antibody TA301518 - Total protein from Human HeLa cells treated with and without 0.1 mM Diethyl Maleate for 24 hours was separated on a 12% gel by SDS-PAGE, transferred to PVDF membrane and blocked in 5% non-fat milk in TBST. The membrane was probed with 2.0 ug/ml anti-xCT in 1% non-fat milk in TBST and detected with an anti-rabbit HRP secondary antibody using chemiluminescence. Note the increase in xCT expression with treatment.



Flow Cytometry: xCT Antibody TA301518 - An intracellular stain was performed on HeLa with xCT Antibody TA301518 and a matched isotype control. Cells were fixed with 4% PFA and then permeabilized 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).



Immunohistochemistry: xCT Antibody TA301518 - xCT staining in the absorptive epithelia of small intestinal villi detected using TA301518.



Dual RNAscope ISH-IHC: xCT Antibody TA301518 - Formalin-fixed paraffin-embedded tissue sections of human stomach were probed for xCT mRNA (ACD RNAscope Probe, catalog #422688; Fast Red chromogen, ACD catalog # 322750). Adjacent tissue section was processed for immunohistochemistry using Rabbit Polyclonal (Novus Biologicals catalog # TA301518) at 0.25ug/mL with 1 hour incubation at room temperature followed by incubation with anti-rabbit IgG VisUCyte HRP Polymer Antibody (Catalog # VC003) and DAB chromogen (yellow-brown). Tissue was counterstained with hematoxylin (blue). Specific staining was localized to glandular cells.