

**xCT Antibody**  
**Rabbit mAb**  
**Catalog # AP91476****Specification**

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**xCT Antibody - Product Information**

Application	<b>WB, IP</b>
Primary Accession	<a href="#">Q9UPY5</a>
Reactivity	<b>Rat</b>
Clonality	<b>Monoclonal</b>
<b>Other Names</b>	
CCBR1; Cysteine/glutamate transporter; SLC7A11; solute carrier family 7; xCT;	
Isotype	<b>Rabbit IgG</b>
Host	<b>Rabbit</b>
Calculated MW	<b>55423 Da</b>

**xCT Antibody - Additional Information**

Dilution	<b>WB~~1:1000</b> <b>IP~~N/A</b>
Purification	<b>Affinity-chromatography</b>
Immunogen	<b>A synthesized peptide derived from human xCT</b>
Description	<b>Sodium-independent, high-affinity exchange of anionic amino acids with high specificity for anionic form of cystine and glutamate.</b>
Storage Condition and Buffer	<b>Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.</b>

**xCT Antibody - Protein Information****Name** SLC7A11 ([HGNC:11059](#))**Function**

Heterodimer with SLC3A2, that functions as an antiporter by mediating the exchange of extracellular anionic L-cystine and intracellular L-glutamate across the cellular plasma membrane (PubMed: [11133847](http://www.uniprot.org/citations/11133847), PubMed: [11417227](http://www.uniprot.org/citations/11417227), PubMed: [14722095](http://www.uniprot.org/citations/14722095), PubMed: [15151999](http://www.uniprot.org/citations/15151999), PubMed: [34880232](http://www.uniprot.org/citations/34880232), PubMed: [35245456](http://www.uniprot.org/citations/35245456), PubMed: [35352032](http://www.uniprot.org/citations/35352032)). Provides L-cystine for the maintenance of the redox balance between extracellular L- cystine and

L-cysteine and for the maintenance of the intracellular levels of glutathione that is essential for cells protection from oxidative stress (By similarity). The transport is sodium-independent, electroneutral with a stoichiometry of 1:1, and is driven by the high intracellular concentration of L-glutamate and the intracellular reduction of L-cystine (PubMed:[11133847](http://www.uniprot.org/citations/11133847)), PubMed:[11417227](http://www.uniprot.org/citations/11417227)). In addition, mediates the import of L-kynurenine leading to anti-ferroptotic signaling propagation required to maintain L-cystine and glutathione homeostasis (PubMed:[35245456](http://www.uniprot.org/citations/35245456)). Moreover, mediates N-acetyl-L-cysteine uptake into the placenta leading to subsequently down-regulation of pathways associated with oxidative stress, inflammation and apoptosis (PubMed:[34120018](http://www.uniprot.org/citations/34120018)). In vitro can also transport L-aspartate (PubMed:[11417227](http://www.uniprot.org/citations/11417227)). May participate in astrocyte and meningeal cell proliferation during development and can provide neuroprotection by promoting glutathione synthesis and delivery from non-neuronal cells such as astrocytes and meningeal cells to immature neurons (By similarity). Controls the production of pheomelanin pigment directly (By similarity).

#### **Cellular Location**

Cell membrane; Multi-pass membrane protein. Cell projection, microvillus membrane; Multi-pass membrane protein. Note=Localized to the microvillous membrane of the placental syncytiotrophoblast.

#### **Tissue Location**

Expressed in term placenta and primary term cytotrophoblast (PubMed:34120018). Expressed mainly in the brain, but also in pancreas (PubMed:11417227).

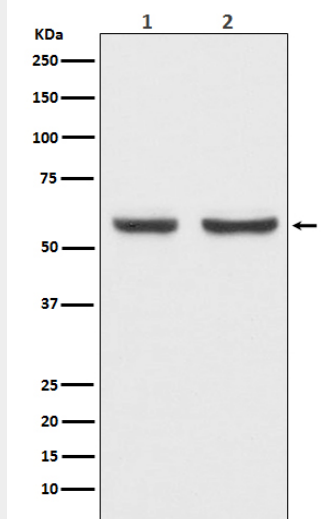
#### **xCT Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### **xCT Antibody - Images**





Western blot analysis of xCT expression in (1) HepG2 cell lysate; (2) Mouse brain lysate.