10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

xCT Rabbit pAb

Catalog # AP53643

Product Information

Primary Accession	Q9UPY5
Host	Rabbit
Clonality	Polyclonal Antibody
Calculated MW	55423

Additional Information

Gene ID	23657
Other Names	xCT; CCBR1
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

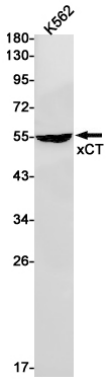
Name	SLC7A11 (HGNC:11059)
Function	Heterodimer with SLC3A2, that functions as an antiporter by mediating the exchange of extracellular anionic L-cystine and intracellular L-glutamate across the cellular plasma membrane (PubMed:11133847, PubMed:11417227, PubMed:14722095, PubMed:15151999, PubMed:34880232, PubMed:35245456, PubMed: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 drove by the high intracellular concentration of L-glutamate and the intracellular reduction of L-cystine (PubMed:11133847, PubMed:11417227). Acts as an inhibitor of ferroptosis by mediating the import of L-kynurenine leading to anti-ferroptotic signaling propagation required to maintain L-cystine and glutathione homeostasis (PubMed:35245456, PubMed:40246981). Also inhibits ferroptosis by acting as an atypical proton transporter that mediates a slow proton efflux from lysosomes via cystine and glutamate flux (PubMed:40280132). Glutamate and cystine contain side-chain groups that are protonatable in the physiological range of lysosomal pH and cytosolic pH, respectively, enabling a slow lysosomal proton leak through a substrate-as-proton mechanism (PubMed:40280132). 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). In vitro can also transport L-aspartate (PubMed: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. Lysosome membrane; Multi-pass membrane protein. Cell projection, microvillus membrane; Multi-pass membrane protein. Note=Localized to the microvillous membrane of the placental syncytiotrophoblast (PubMed:34120018). Plasma membrane localization is impaired by LGALS13 (PubMed:40246981)
Tissue Location	Expressed in term placenta and primary term cytotrophoblast (PubMed:34120018). Expressed mainly in the brain, but also in pancreas (PubMed:11417227).

Background

Swiss-Prot Acc.Q9UPY5.Sodium-independent, high-affinity exchange of anionic amino acids with high specificity for anionic form of cystine and glutamate.

Images



Western blot detection of xCT in K562 cell lysates using xCT Rabbit pAb(1:1000 diluted).Predicted band size:55kDa.Observed band size:55kDa.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.