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SLC7A11 / XCT Antibody (Internal)

Goat Polyclonal Antibody
Catalog # ALS13331

Specification

SLC7A11 / XCT Antibody (Internal) - Product Information

Application	**IHC**
Primary Accession	Q9UPY5
Reactivity	**Human, Monkey**
Host	**Goat**
Clonality	**Polyclonal**
Calculated MW	**55kDa KDa**

SLC7A11 / XCT Antibody (Internal) - Additional Information

Gene ID 23657

Other Names
Cystine/glutamate transporter, Amino acid transport system xc-, Calcium channel blocker resistance protein CCBR1, Solute carrier family 7 member 11, xCT, SLC7A11

Target/Specificity
Human SLC7A11.

Reconstitution & Storage
Store at -20°C. Minimize freezing and thawing.

Precautions
SLC7A11 / XCT Antibody (Internal) is for research use only and not for use in diagnostic or therapeutic procedures.

SLC7A11 / XCT Antibody (Internal) - 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). In addition, mediates the import of L-kynurenine leading to anti-ferroptotic signaling propagation required to maintain L-cystine and glutathione homeostasis (PubMed: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). 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. Cell projection, microvillus membrane; Multi-pass membrane protein. Note=Localized to the microvillous membrane of the placental syncytiotrophoblast.

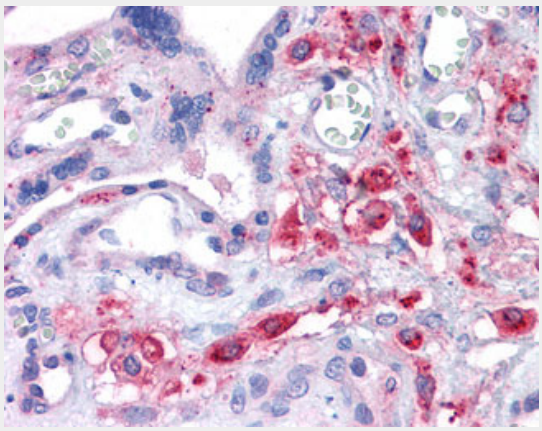
Tissue Location
Expressed in term placenta and primary term cytotrophoblast (PubMed:34120018). Expressed mainly in the brain, but also in pancreas (PubMed:11417227).

SLC7A11 / XCT Antibody (Internal) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

SLC7A11 / XCT Antibody (Internal) - Images



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Anti-SLC7A11 antibody IHC of human placenta.

SLC7A11 / XCT Antibody (Internal) - Background

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

SLC7A11 / XCT Antibody (Internal) - References

Sato H.,et al.Antioxid. Redox Signal. 2:665-671(2000).
Conklin D.S.,et al.Submitted (NOV-1999) to the EMBL/GenBank/DDBJ databases.
Bridges C.C.,et al.Invest. Ophthalmol. Vis. Sci. 42:47-54(2001).
Borsani G.,et al.Submitted (JAN-2002) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).