

**xCT/SLC7A11 Antibody**

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**For Research Use Only. Not for Use in Diagnostic Procedures.**

<b>Applications:</b> W	<b>Reactivity:</b> M	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 35	<b>Source/Isotype:</b> Rabbit	<b>UniProt ID:</b> #Q9WTR6	<b>Entrez-Gene Id:</b> 26570
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**Product Usage Information****Application**

Western Blotting

**Dilution**

1:1000

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

**Specificity/Sensitivity**

xCT/SLC7A11 Antibody recognizes endogenous levels of total mouse xCT/SLC7A11 protein.

**Source / Purification**

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro25 of mouse xCT/SLC7A11 protein. Antibodies are purified by protein A and peptide affinity chromatography.

**Background**

The x(c-) cysteine/glutamate antiporter consists of a light chain subunit (xCT/SLC7A11) that confers substrate specificity and a glycosylated heavy chain subunit (4F2hc/SLC3A2) located on the cell surface (1,2). The heterodimeric amino acid transport system x(c-) provides selective import of cysteine into cells in exchange for glutamate and regulating intracellular glutathione (GSH) levels, which is essential for cellular protection from oxidative stress (3). Research studies have shown that xCT expression increases in various tumors, including gliomas, and have implicated xCT in GSH-mediated anticancer drug resistance (4,5). Researchers have found that xCT provides neuroprotection by enhancing glutathione export from non-neuronal cells (6). Moreover, investigators identified xCT as the fusion-entry receptor for Kaposi's sarcoma-associated herpesvirus (7).

**Background References**

1. Sato, H. et al. (2000) *Antioxid Redox Signal* 2, 665-71.
2. Sato, H. et al. (1999) *J Biol Chem* 274, 11455-8.
3. Lo, M. et al. (2008) *J Cell Physiol* 215, 593-602.
4. Huang, Y. et al. (2005) *Cancer Res* 65, 7446-54.
5. Liu, R. et al. (2007) *Mol Pharmacol* 72, 1637-46.
6. Shih, A.Y. et al. (2006) *J Neurosci* 26, 10514-23.
7. Kaleeba, J.A. and Berger, E.A. (2006) *Science* 311, 1921-4.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**W:** Western Blotting

**Cross-Reactivity Key**

**M:** Mouse

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