

#12691 Store at -20°C

xCT/SLC7A11 (D2M7A) Rabbit mAb



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

Applications: WB, IP	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 35	Source/Isotype: Rabbit IgG	UniProt ID: #Q9UPY5	Entrez-Gene Id: 23657
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Product Usage Information

Application

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity / Sensitivity

xCT/SLC7A11 (D2M7A) Rabbit mAb recognizes endogenous levels of total xCT/SLC7A11 protein.

Species predicted to react based on 100% sequence homology:

Monkey

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala224 of human xCT/SLC7A11 protein.

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

WB: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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