#12691 Store at -20°C

xCT/SLC7A11 (D2M7A) Rabbit mAb

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Entrez Gene ID #23657
UniProt ID #Q9UPY5

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP	H, (Mk)	35 kDa	Rabbit IgG**
Endogenous			

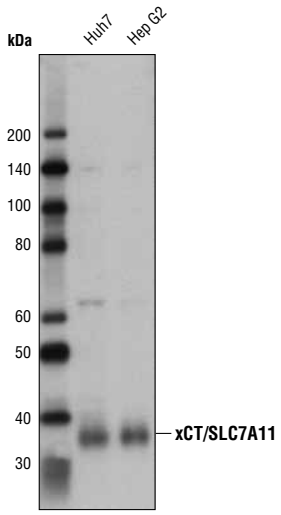
Background: The x(c)(-) cysteine/glutamate antiporter consists of a light chain subunit (xCT/SLC7A11) that confers substrate specificity and a glycosylated heavy chain subunit (4F2hc/SLC3A2) located on the cell surface (1,2). The heterodimeric amino acid transport system x(c)(-) provides selective import 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).

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

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

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.



Western blot analysis of extracts from Huh7 and Hep G2 cells using xCT/SLC7A11 (D2M7A) Rabbit mAb.

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.*

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:50

For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended complementary products.

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

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide
Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **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 **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.