**BACKGROUND**

xCT, also known as SLC7A11 (solute carrier family 7, (cationic amino acid transporter, y+ system) member 11) or CB7R1, is a 501 amino acid multi-pass membrane protein that belongs to the polyamine-organocation superfAMILY of amino acid transporters. Existing as a disulfide-linked heterodimer with CD98, xCT functions as a member of a heteromeric Na^+_independent anionic amino acid transport system that specifically facilitates the exchange of anionic amino acids for anionic forms of cystine and glutamate, thereby mediating the formation of glutathione within the cell. Due to its involvement in amino acid transport, xCT is associated with the pathogenesis of glioma-induced neuregeneration and brain edema, as well as pancreatic cancer. The gene encoding xCT maps to human chromosome 4, which encodes nearly 6% of the human genome and has the largest gene deserts (regions of the genome with no protein encoding genes) of all of the human chromosomes.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: SLC7A11 (human) mapping to 4q28.3; Slc7a11 (mouse) mapping to 3 C.

**SOURCE**

xCT (H-121) is a rabbit polyclonal antibody raised against amino acids 134-249 mapping within an internal region of xCT of human origin.

**PRODUCT**

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

**APPLICATIONS**

xCT (H-121) is recommended for detection of xCT of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:1000-1:10000), immunoprecipitation (1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:300).

xCT (H-121) is also recommended for detection of xCT in additional species, including equine, canine, porcine and avian.

Suitable for use as control antibody for xCT siRNA (h): sc-76933, xCT siRNA (m): sc-76934, xCT shRNA Plasmid (h): sc-76933-SH, xCT shRNA Plasmid (m): sc-76934-SH, xCT shRNA (h) Lentiviral Particles: sc-76933-V and xCT shRNA (m) Lentiviral Particles: sc-76934-V.

Molecular Weight of xCT: 40 kDa.

Positive Controls: THP-1 cell lysate: sc-2238, Hep G2 cell lysate: sc-2227 or Jurkat whole cell lysate: sc-2204.

**RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

**DATA**

**SELECT PRODUCT CITATIONS**


**STORAGE**

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.