

CHIC1 (Y-17): sc-101918

BACKGROUND

In mammals, X-chromosome inactivation is required to ensure equivalent levels of gene expression from the sex chromosomes. X chromosome inactivation in mammals requires the X inactivation center (XIC) and the Xist (X inactive specific transcript) gene product, which is exclusively expressed from the inactive chromosome. CHIC1 (cysteine-rich hydrophobic domain 1), also known as BRX (brain X-linked protein), is a 224 amino acid protein that is encoded by a gene which localizes to the XIC candidate region of the X chromosome. Localizing to the cell membrane and to cytoplasmic vesicles, CHIC1 is palmitoylated and preferentially expressed in brain. In mice, CHIC1 is normally X-inactivated. Due to the chromosomal location of the CHIC1 gene, it is believed that CHIC1 may play a role in certain X-linked mental retardation syndromes.

REFERENCES

1. Simmler, M.C., et al. 1997. Localization and expression analysis of a novel conserved brain expressed transcript, Brx/BRX, lying within the Xic/XIC candidate region. *Mamm. Genome*. 8: 760-766.
2. Allaman-Pillet, N., et al. 2000. The 5' repeat elements of the mouse Xist gene inhibit the transcription of X-linked genes. *Gene Expr*. 9: 93-101.
3. Prissette, M., et al. 2001. Methylation profiles of DXPas34 during the onset of X-inactivation. *Hum. Mol. Genet*. 10: 31-38.
4. Avner, P. and Heard, E. 2001. X-chromosome inactivation: counting, choice and initiation. *Nat. Rev. Genet*. 2: 59-67.
5. Shevchenko, A.I., et al. 2007. Genes flanking Xist in mouse and human are separated on the X chromosome in American marsupials. *Chromosome Res*. 15: 127-136.
6. Davidow, L.S., et al. 2007. The search for a marsupial XIC reveals a break with vertebrate syteny. *Chromosome Res*. 15: 137-146.

CHROMOSOMAL LOCATION

Genetic locus: CHIC1 (human) mapping to Xq13.2; Chic1 (mouse) mapping to X D.

SOURCE

CHIC1 (Y-17) is a purified rabbit polyclonal antibody raised against CHIC1 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

CHIC1 (Y-17) is recommended for detection of CHIC1 of mouse, rat, human, canine and zebrafish origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CHIC1 siRNA (h): sc-91188, CHIC1 siRNA (m): sc-142328, CHIC1 shRNA Plasmid (h): sc-91188-SH, CHIC1 shRNA Plasmid (m): sc-142328-SH, CHIC1 shRNA (h) Lentiviral Particles: sc-91188-V and CHIC1 shRNA (m) Lentiviral Particles: sc-142328-V.

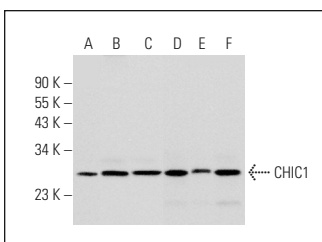
Molecular Weight of CHIC1: 26 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, mouse brain extract: sc-2253 or mouse cerebellum extract: sc-2403.

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).

DATA



CHIC1 (Y-17): sc-101918. Western blot analysis of CHIC1 expression in Jurkat (A), U-251-MG (B) and IMR-32 (C) whole cell lysates and mouse brain (D), rat brain (E) and mouse cerebellum (F) tissue extracts.

RESEARCH USE

For research use only, not for use in diagnostic procedures.