

CHP (E-14): sc-160240

BACKGROUND

CHP (calcineurin homologous protein), also known as calcium-binding protein p22 and Calcineurin B homolog, is a 195 amino acid protein that shares significant sequence similarity to calmodulin and PP2B-A β , a calmodulin-regulated protein phosphatase. Required for constitutive membrane traffic, CHP functions as a monomer and is expressed in fetal eye, muscle, kidney, liver, lung, spleen and thymus. Decreased phosphorylation of CHP is associated with an increase in exchange activity. Overexpression of CHP inhibits GTPase-stimulated NHE-1 activity, impairs nuclear translocation and transcriptional activity of NFAT and inhibits phosphatase activity of calcineurin in a dose-dependent manner.

REFERENCES

- Lin, X. and Barber, D.L. 1996. A calcineurin homologous protein inhibits GTPase-stimulated Na-H exchange. *Proc. Natl. Acad. Sci. USA* 93: 12631-12636.
- Lin, X., et al. 1999. Inhibition of calcineurin phosphatase activity by a calcineurin B homologous protein. *J. Biol. Chem.* 274: 36125-36131.
- Pang, T., et al. 2001. Calcineurin homologous protein as an essential cofactor for Na⁺/H⁺ exchangers. *J. Biol. Chem.* 276: 17367-17372.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606988. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Shimizu, T. and Mishima, M. 2006. Regulation mechanism of Na⁺ H⁺ exchanger by novel calcium binding proteins. *Tanpakushitsu Kakusan Koso* 51: 363-369.

CHROMOSOMAL LOCATION

Genetic locus: CHP1 (human) mapping to 15q15.1; Chp1 (mouse) mapping to 2 E5.

SOURCE

CHP (E-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CHP of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-160240 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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

CHP (E-14) is recommended for detection of CHP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 1:30-1:3000); non cross-reactive with CHP2.

CHP (E-14) is also recommended for detection of CHP in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for CHP siRNA (h): sc-90201, CHP siRNA (m): sc-142330, CHP siRNA (r): sc-156114, CHP shRNA Plasmid (h): sc-90201-SH, CHP shRNA Plasmid (m): sc-142330-SH, CHP shRNA Plasmid (r): sc-156114-SH, CHP shRNA (h) Lentiviral Particles: sc-90201-V, CHP shRNA (m) Lentiviral Particles: sc-142330-V and CHP shRNA (r) Lentiviral Particles: sc-156114-V.

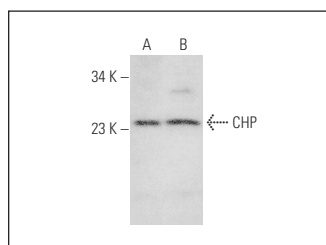
Molecular Weight of CHP: 22 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or U-698-M whole cell lysate: sc-364799.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



CHP (E-14): sc-160240. Western blot analysis of CHP expression in HeLa (A) and U-698-M (B) whole cell lysates.

RESEARCH USE

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