

CaBP7 (N-19): sc-86350

BACKGROUND

Calcium plays an essential role in many biological processes. The calcium binding protein (CaBP) family shares much similarity with CaM I (calmodulin). It has been shown that CaBP proteins can substitute functionally for, and possibly augment the function of, CaM I. Calcium binding proteins play a crucial role in the calcium-mediated cellular signal transduction pathway in the central nervous system. There are several members of the family with varying expression patterns. CaBP7 (Calcium-binding protein 7) is a 257 amino acid protein that shares 70% homology with CaBP8 and 50% homology with CaM I. Characteristic of the CaBP protein family, CaBP7 contains two EF-hand domains for calcium binding.

REFERENCES

1. Sokal, I., et al. 2000. Ca²⁺-binding proteins in the retina: from discovery to etiology of human disease. *Biochim. Biophys. Acta* 1498: 233-251.
2. Haeseleer, F., et al. 2000. Five members of a novel Ca²⁺-binding protein (CaBP) subfamily with similarity to calmodulin. *J. Biol. Chem.* 275: 1247-1260.
3. Burgoyne, R.D. and Weiss, J.L. 2001. The neuronal calcium sensor family of Ca²⁺-binding proteins. *Biochem. J.* 353: 1-12.
4. Haeseleer, F. and Palczewski, K. 2002. Calmodulin and Ca²⁺-binding proteins (CaBPs): variations on a theme. *Adv. Exp. Med. Biol.* 514: 303-317.
5. Haeseleer, F., et al. 2002. Calcium-binding proteins: intracellular sensors from the calmodulin superfamily. *Biochem. Biophys. Res. Commun.* 290: 615-623.
6. Ikura, M., et al. 2002. The role of calcium-binding proteins in the control of transcription: structure to function. *Bioessays* 24: 625-636.
7. Yu, L.R., et al. 2007. Improved titanium dioxide enrichment of phosphopeptides from HeLa cells and high confident phosphopeptide identification by cross-validation of MS/MS and MS/MS/MS spectra. *J. Proteome Res.* 6: 4150-4162.

CHROMOSOMAL LOCATION

Genetic locus: CABP7 (human) mapping to 22q12.2; Cabp7 (mouse) mapping to 11 A1.

SOURCE

CaBP7 (N-19) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of CaBP7 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-86350 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

CaBP7 (N-19) is recommended for detection of CaBP7 of mouse, rat and human 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)], 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 other CaBP family members.

CaBP7 (N-19) is also recommended for detection of CaBP7 in additional species, including canine.

Suitable for use as control antibody for CaBP7 siRNA (h): sc-72772, CaBP7 siRNA (m): sc-141965, CaBP7 shRNA Plasmid (h): sc-72772-SH, CaBP7 shRNA Plasmid (m): sc-141965-SH, CaBP7 shRNA (h) Lentiviral Particles: sc-72772-V and CaBP7 shRNA (m) Lentiviral Particles: sc-141965-V.

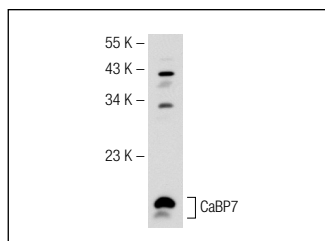
Molecular Weight of CaBP7: 24 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

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



CaBP7 (N-19): sc-86350. Western blot analysis of CaBP7 expression in HeLa whole cell lysate.

SELECT PRODUCT CITATIONS

1. Hradsky, J., et al. 2011. Post-translational membrane insertion of tail-anchored transmembrane EF-hand Ca²⁺ sensor calneurons requires the TRC40/Asna1 protein chaperone. *J. Biol. Chem.* 286: 36762-36776.

STORAGE

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