

CAPS2 (A-16): sc-167381

BACKGROUND

CAPS2 (calcyphosine 2), also known as calcyphosin-2, is a 557 amino acid calcium-binding protein that is abundantly expressed, with highest expression found in placenta, testis, colon, lung and brain. CAPS2 contains three EF-hand domains and exists as three alternatively spliced isoforms. Suggested to play a role in large dense-core vesicle (LDCV) exocytosis, CAPS2 is encoded by a gene that maps to human chromosome 12, which encodes over 1,100 genes and comprises approximately 4.5% of the human genome. Chromosome 12 is associated with a variety of diseases and afflictions, including hypochondrogenesis, achondrogenesis, Kniest dysplasia, Noonan syndrome and trisomy 12p, which causes facial developmental defects and seizure disorders.

REFERENCES

- Hastings, D.E., et al. 1975. Rheumatoid wrist deformities and their relation to ulnar drift. *J. Bone Joint Surg. Am.* 57: 930-934.
- Delgado Carrasco, J., et al. 2001. Achondrogenesis type II-hypochondrogenesis: radiological features. *Case report. An. Esp. Pediatr.* 55: 553-557.
- Wang, S., et al. 2002. Cloning, characterization, and expression of calcyphosine 2, a novel human gene encoding an EF-hand Ca²⁺-binding protein. *Biochem. Biophys. Res. Commun.* 291: 414-420.
- Speidel, D., et al. 2003. A family of Ca²⁺-dependent activator proteins for secretion: comparative analysis of structure, expression, localization, and function. *J. Biol. Chem.* 278: 52802-52809.
- Online Mendelian Inheritance in Man, OMIM[™]. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 607724. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Forzano, F., et al. 2007. A familial case of achondrogenesis type II caused by a dominant COL2A1 mutation and "patchy" expression in the mosaic father. *Am. J. Med. Genet. A* 143A: 2815-2820.
- Lo, F.S., et al. 2009. High resolution melting analysis for mutation detection for PTPN11 gene: applications of this method for diagnosis of Noonan syndrome. *Clin. Chim. Acta* 409: 75-77.
- Benussi, D.G., et al. 2009. Trisomy 12p and monosomy 4p: phenotype-genotype correlation. *Genet. Test. Mol. Biomarkers* 13: 199-204.

CHROMOSOMAL LOCATION

Genetic locus: Caps2 (mouse) mapping to 10 D2.

SOURCE

CAPS2 (A-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CAPS2 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-167381 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CAPS2 (A-16) is recommended for detection of CAPS2 of mouse and rat 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 CAPS1 or CAPSL.

Suitable for use as control antibody for CAPS2 siRNA (m): sc-142005, CAPS2 shRNA Plasmid (m): sc-142005-SH and CAPS2 shRNA (m) Lentiviral Particles: sc-142005-V.

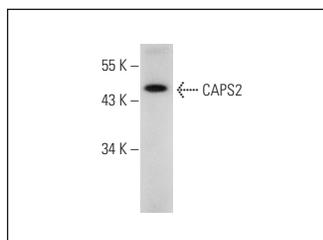
Molecular Weight of CAPS2: 68 kDa.

Positive Controls: mouse testis extract: sc-2405.

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



CAPS2 (A-16): sc-167381. Western blot analysis of CAPS2 expression in mouse testis tissue extract.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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