



# CAMTA2 (S-14): sc-107471

## BACKGROUND

CAMTA2 (calmodulin binding transcription activator 2), also known as KIAA0909, is a 1,202 amino acid protein that localizes to the nucleus and contains one IPT/TIG domain, one CG-1 domain, two IQ domains and three ANK repeats. Expressed in brain tissue, CAMTA2 is thought to interact with calmodulin (CaM) and may function as a transcriptional activator, possibly playing a role in tumor suppression. Multiple isoforms of CAMTA2 exist due to alternative splicing events. The gene encoding CAMTA2 maps to human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Tumor suppressor p53 is necessary for maintenance of cellular genetic integrity by moderating cell fate through DNA repair versus cell death. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, though specifically it is recognized as a genetic determinant of early onset breast cancer and predisposition to cancers of the ovary, colon, prostate gland and fallopian tubes.

## REFERENCES

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2. Nakatani, K., Nishioka, J., Itakura, T., Nakanishi, Y., Horinouchi, J., Abe, Y., Wada, H. and Nobori, T. 2004. Cell cycle-dependent transcriptional regulation of calmodulin-binding transcription activator 1 in neuroblastoma cells. *Int. J. Oncol.* 24: 1407-1412.
3. Schwartz, R.J. and Schneider, M.D. 2006. CAMTA in cardiac hypertrophy. *Cell* 125: 427-429.
4. Song, K., Backs, J., McAnally, J., Qi, X., Gerard, R.D., Richardson, J.A., Hill, J.A., Bassel-Duby, R. and Olson, E.N. 2006. The transcriptional coactivator CAMTA2 stimulates cardiac growth by opposing class II histone deacetylases. *Cell* 125: 453-466.
5. Liu, N. and Olson, E.N. 2006. Coactivator control of cardiovascular growth and remodeling. *Curr. Opin. Cell Biol.* 18: 715-722.
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## CHROMOSOMAL LOCATION

Genetic locus: CAMTA2 (human) mapping to 17p13.2; Camta2 (mouse) mapping to 11 B3.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

## SOURCE

CAMTA2 (S-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CAMTA2 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.

Blocking peptide available for competition studies, sc-107471 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-107471 X, 200 µg/0.1 ml.

## APPLICATIONS

CAMTA2 (S-14) is recommended for detection of CAMTA2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Suitable for use as control antibody for CAMTA2 siRNA (h): sc-94073, CAMTA2 siRNA (m): sc-141998, CAMTA2 shRNA Plasmid (h): sc-94073-SH, CAMTA2 shRNA Plasmid (m): sc-141998-SH, CAMTA2 shRNA (h) Lentiviral Particles: sc-94073-V and CAMTA2 shRNA (m) Lentiviral Particles: sc-141998-V.

CAMTA2 (S-14) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of CAMTA2: 132 kDa.

## 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) 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.

## RESEARCH USE

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