

# IQCC (E-18): sc-243098

## BACKGROUND

Widely distributed in nature, the IQ domain forms an amphiphilic seven-turn  $\alpha$ -helix capable of binding calmodulin in a  $\text{Ca}^{2+}$ -independent manner. The level of intracellular calcium is tightly regulated in all eukaryotic cells. A modest increase in this level can result in a myriad of physiological responses, most of which are mediated by calmodulin (CaM), the universal calcium sensor. IQCC (IQ motif containing C) is a 466 amino acid protein that contains one IQ domain. Existing as two alternatively spliced isoforms, IQCC is encoded by a gene located on human chromosome 1p35.1. Human chromosome 1 is the largest human chromosome spanning about 260 million base pairs and making up 8% of the human genome. There are about 3,000 genes on chromosome 1, and considering the great number of genes there are also a large number of diseases associated with chromosome 1, including Hutchinson-Gilford progeria, Parkinsons, Gaucher disease and Usher syndrome.

## REFERENCES

1. Bouché, N., et al. 2002. A novel family of calmodulin-binding transcription activators in multicellular organisms. *J. Biol. Chem.* 277: 21851-21861.
2. Terrak, M., et al. 2003. Two distinct myosin light chain structures are induced by specific variations within the bound IQ motifs-functional implications. *EMBO J.* 22: 362-371.
3. Nakatani, K., et al. 2004. Cell cycle-dependent transcriptional regulation of calmodulin-binding transcription activator 1 in neuroblastoma cells. *Int. J. Oncol.* 24: 1407-1412.
4. Weise, A., et al. 2005. New insights into the evolution of chromosome 1. *Cytogenet. Genome Res.* 108: 217-222.
5. Gregory, S.G., et al. 2006. The DNA sequence and biological annotation of human chromosome 1. *Nature* 441: 315-321.
6. Marzin, Y., et al. 2006. Chromosome 1 abnormalities in multiple myeloma. *Anticancer Res.* 26: 953-959.
7. Black, D.J., et al. 2007. The kinetics of  $\text{Ca}^{2+}$ -dependent switching in a calmodulin-IQ domain complex. *Biochemistry* 46: 13415-13424.

## CHROMOSOMAL LOCATION

Genetic locus: *Iqcc* (mouse) mapping to 4 D2.2.

## SOURCE

IQCC (E-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of IQCC of mouse origin.

## PRODUCT

Each vial contains 200  $\mu\text{g}$  IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-243098 P, (100  $\mu\text{g}$  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

IQCC (E-18) is recommended for detection of IQCC of mouse and rat 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 IQCC siRNA (m): sc-146265, IQCC shRNA Plasmid (m): sc-146265-SH and IQCC shRNA (m) Lentiviral Particles: sc-146265-V.

Molecular Weight of IQCC isoforms: 53/27 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.

## 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.