

# ISOC2 (T-12): sc-168211

## BACKGROUND

ISOC2 (isochorismatase domain-containing protein 2) is a 205 amino acid protein belonging to the isochorismatase family. Isochorismatase is an enzyme that catalyzes the chemical reaction of isochorismate and water to 2,3-dihydroxy-2,3-dihydrobenzoate and pyruvate. Localized to mitochondrion and cytoplasm, ISOC2 interacts with CDKN2A and localizes to the nucleus in the presence of it. ISOC2 is ubiquitously expressed, with highest levels found in uterus, stomach and urinary tract system. Over-expressed ISOC2 inhibits the expression of CDKN2A, suggesting that this novel gene may play a role during tumor development by interacting with CDKN2A. Three isoforms are produced by alternative splicing events.

## REFERENCES

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2. Ruas, M. and Peters, G. 1998. The p16INK4a/CDKN2A tumor suppressor and its relatives. *Biochim. Biophys. Acta* 1378: F115-F177.
3. Jacobs, J.J. and de Lange, T. 2004. Significant role for p16INK4a in p53-independent telomere-directed senescence. *Curr. Biol.* 14: 2302-2308.
4. Ishikawa, A., Sasaki, M., Sato, Y., Ohira, S., Chen, M.F., Huang, S.F., Oda, K., Nimura, Y. and Nakanuma, Y. 2004. Frequent p16ink4a inactivation is an early and frequent event of intraductal papillary neoplasm of the liver arising in hepatolithiasis. *Hum. Pathol.* 35: 1505-1514.
5. Ohtani, N., Yamakoshi, K., Takahashi, A. and Hara, E. 2004. The p16INK4a-RB pathway: molecular link between cellular senescence and tumor suppression. *J. Med. Invest.* 51: 146-153.
6. Huang, X., Shi, Z., Wang, W., Bai, J., Chen, Z., Xu, J., Zhang, D. and Fu, S. 2007. Identification and characterization of a novel protein ISOC2 that interacts with p16INK4a. *Biochem. Biophys. Res. Commun.* 361: 287-293.
7. Online Mendelian Inheritance in Man, OMIM™. 2009. Johns Hopkins University, Baltimore, MD. MIM Number: 612928. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: ISOC2 (human) mapping to 19q13.42.

## SOURCE

ISOC2 (T-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ISOC2 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-168211 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

ISOC2 (T-12) is recommended for detection of ISOC2 of 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); non cross-reactive with ISOC1.

ISOC2 (T-12) is also recommended for detection of ISOC2 in additional species, including canine.

Suitable for use as control antibody for ISOC2 siRNA (h): sc-97269, ISOC2 shRNA Plasmid (h): sc-97269-SH and ISOC2 shRNA (h) Lentiviral Particles: sc-97269-V.

Molecular Weight of ISOC2 isoforms 1/2/3: 22/24/15 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.