SANTA CRUZ BIOTECHNOLOGY, INC.

ICAT (G-16): sc-25175

BACKGROUND

ICAT interacts directly with β-catenin and interferes with the Wnt signaling pathway. Specifically, ICAT prevents the interaction of β-catenin with TCF-4 and inhibits β-catenin—TCF-4-mediated transactivation. The negative regulatory effect of ICAT on the Wnt signaling pathway appears to inhibit tumor cell proliferation. ICAT also induces G_2 arrest followed by cell death in colorectal tumor cells. The ectopic induction of ICAT inhibits the expression of β3 Tubulin and thus neuronal differentiation in embryonal carcinoma P19 cells. Structural characteristics of ICAT include a three-helix bundle and a C-terminal tail. The gene encoding human ICAT maps to chromosome 1p36.22.

REFERENCES

1. Tago, K., Nakamura, T., Nishita, M., Hyodo, J., Nagai, S., Murata, Y., Adachi, S., Ohwada, S., Morishita, Y., Shibuya, H. and Akiyama, T. 2000. Inhibition of Wnt signaling by ICAT, a novel β-catenin-interacting protein. Genes Dev. 14: 1741-1749.
2. Sekiya, T., Nakamura, T., Kazuki, Y., Oshimura, M., Kohu, K., Tago, K., Ohwada, S. and Akiyama, T. 2002. Overexpression of ICAT induces G_2 arrest and cell death in tumor cell mutants for adenomatous polyposis coli, β-catenin, or Axin. Cancer Res. 62: 3322-3326.
3. Graham, T.A., Clements, W.K., Kimelman, D. and Xu, W. 2002. The crystal structure of the β-catenin/ICAT complex reveals the inhibitory mechanism of ICAT. Mol. Cell 10: 563-571.
4. Reifenberger, J., Knobbe, C.B., Wolter, M., Blaschke, B., Schulte, K.W., Pietsch, T., Ruzicka, T. and Reifenberger, G. 2002. Molecular genetic analysis of malignant melanomas for aberrations of the Wnt signaling pathway genes CTNNB1, APC, ICAT and BTRC. Int. J. Cancer 100: 549-556.
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CHROMOSOMAL LOCATION

Genetic locus: CTNNBIP1 (human) mapping to 1p36.22; Ctnnbip1 (mouse) mapping to 4 E2.

SOURCE

ICAT (G-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of ICAT 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-25175 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

ICAT (G-16) is recommended for detection of ICAT of mouse 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).

ICAT (G-16) is also recommended for detection of ICAT in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for ICAT siRNA (h): sc-43858, ICAT siRNA (m): sc-45273, ICAT shRNA Plasmid (h): sc-43858-SH, ICAT shRNA Plasmid (m): sc-45273-SH, ICAT shRNA (h) Lentiviral Particles: sc-43858-V and ICAT shRNA (m) Lentiviral Particles: sc-45273-V.

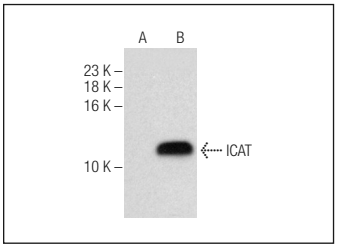
Molecular Weight of ICAT: 9 kDa.

Positive Controls: ICAT (h): 293T Lyaste: sc-370062.

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



ICAT (G-16): sc-25175. Western blot analysis of ICAT expression in non-transfected: sc-117752 (**A**) and human ICAT transfected: sc-370062 (**B**) 293T whole cell lysates.

RESEARCH USE

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