SANTA CRUZ BIOTECHNOLOGY, INC.

survivin (C-6): sc-374616

The Power to Question

BACKGROUND

The baculovirus protein p35 inhibits virally-induced apoptosis of invertebrate and mammalian cells and may function to impair the clearing of virally infected cells by the immune system of the host. This is accomplished at least in part by the ability of p35 to block both TNF- and FAS-mediated apoptosis through the inhibition of the ICE family of serine proteases. Two mammalian homologs of baculovirus p35, referred to as inhibitor of apoptosis protein (IAP) 1 and 2, share an amino-terminal baculovirus IAP repeat (BIR) motif and a carboxy-terminal RING finger. Although the c-IAPs do not directly associate with the TNF receptor (TNF-R), they efficiently block TNF-mediated apoptosis through their interaction with the downstream TNF-R effectors, TRAF1 and TRAF2. Additional IAP family members include ILP (for IAP-like protein) and survivin. ILP inhibits activated caspase-3, leading to the resistance of FAS-mediated apoptosis. Survivin (also designated TIAP) is expressed during the G_2/M phase of the cell cycle and associates with microtubules of the mitotic spindle. Increased caspase-3 activity is detected when a disruption of survivin-microtubule interactions occurs.

CHROMOSOMAL LOCATION

Genetic locus: BIRC5 (human) mapping to 17q25.3.

SOURCE

survivin (C-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2-29 at the N-terminus of survivin of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-374616 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

survivin (C-6) is recommended for detection of survivin of human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (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 survivin siRNA (h): sc-29499, survivin shRNA Plasmid (h): sc-29499-SH and survivin shRNA (h) Lentiviral Particles: sc-29499-V.

Molecular Weight of survivin: 17 kDa.

Positive Controls: HCT-116 whole cell lysate: sc-364175, MOLT-4 cell lysate: sc-2233 or HL-60 whole cell lysate: sc-2209.

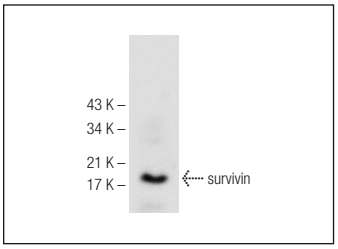
STORAGE

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

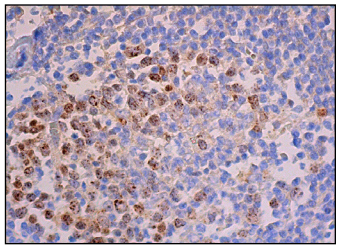
RESEARCH USE

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

DATA



survivin (C-6): sc-374616. Western blot analysis of survivin expression in HCT-116 whole cell lysate.



survivin (C-6): sc-374616. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing nuclear staining of cells in germinal center.

SELECT PRODUCT CITATIONS

1. Stephanie, S., et al. 2013. The MMTV-PyVT transgenic mouse as a multi-stage model for mammary carcinoma and the efficacy of antineoplastic treatment. Sci. Res. 4: 1187-1197.
2. Han, S., et al. 2015. Effect and mechanism of peroxisome proliferator-activated receptor-γ on the drug resistance of the U-87 MG/CDDP human malignant glioma cell line. Mol. Med. Rep. 12: 2239-2246.
3. Cui, Y., et al. 2015. Cytokine-induced killer cells induce apoptosis and inhibit the Akt/nuclear factor-κB signaling pathway in Cisplatin-resistant human glioma U87MG cells. Mol. Med. Rep. 12: 7027-7032.
4. Shi, Y., et al. 2016. Inhibitory effect of metformin combined with gemcitabine on pancreatic cancer cells *in vitro* and *in vivo*. Mol. Med. Rep. 14: 2921-2928.
5. Volpon, L., et al. 2016. Importin 8 mediates m7G cap-sensitive nuclear import of the eukaryotic translation initiation factor eIF4E. Proc. Natl. Acad. Sci. USA 113: 5263-5268.
6. Pratheeshkumar, P., et al. 2017. FoxM1 and β-catenin predicts aggressiveness in Middle Eastern ovarian cancer and their co-targeting impairs the growth of ovarian cancer cells. Oncotarget 9: 3590-3604.
7. Amin, A.R.M.R., et al. 2021. Combination of resveratrol and green tea epigallocatechin gallate induces synergistic apoptosis and inhibits tumor growth *in vivo* in head and neck cancer models. Oncol. Rep. 45: 87.

PROTOCOLS

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

See **survivin (D-8): sc-17779** for survivin antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.