

# p-survivin (Thr 34)-R: sc-23758-R

## BACKGROUND

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. Whereas an increase in caspase-3 activity occurs when the survivin-microtubule interaction is disrupted, survivin (also designated TIAP) is expressed during the G<sub>2</sub>/M phase of the cell cycle and associates with microtubules of the mitotic spindle. Cyclin-dependent kinase p34<sup>Cdc2</sup> associates with survivin and phosphorylates survivin at Thr 34 *in vivo*. Loss of phosphorylation at Thr 34 leads to dissociation of the survivin/caspase-9-complex on the mitotic apparatus.

## REFERENCES

1. Rothe, M., et al. 1995. The TNFR2-TRAF signaling complex contains two novel proteins related to baculoviral inhibitor of apoptosis proteins. *Cell* 83: 1243-1252.
2. Uren, A.G., et al. 1996. Cloning and expression of apoptosis inhibitory protein homologs that function to inhibit apoptosis and/or bind tumor necrosis factor receptor-associated factors. *Proc. Natl. Acad. Sci. USA* 93: 4974-4978.
3. Suzuki, A., et al. 1998. Resistance to FAS-mediated apoptosis: activation of caspase 3 is regulated by cell cycle regulator p21<sup>WAF1</sup> and IAP gene family ILP. *Oncogene* 17: 931-939.

## CHROMOSOMAL LOCATION

Genetic locus: BIRC5 (human) mapping to 17q25.3; Birc5 (mouse) mapping to 11 E2.

## SOURCE

p-survivin (Thr 34)-R is a rabbit polyclonal antibody raised against a short amino acid sequence containing Thr 34 phosphorylated survivin 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-23758 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

p-survivin (Thr 34)-R is recommended for detection of Thr 34 phosphorylated survivin of mouse, rat 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).

Suitable for use as control antibody for survivin siRNA (h): sc-29499, survivin siRNA (m): sc-29500, survivin shRNA Plasmid (h): sc-29499-SH, survivin shRNA Plasmid (m): sc-29500-SH, survivin shRNA (h) Lentiviral Particles: sc-29499-V, survivin shRNA (m) Lentiviral Particles: sc-29500-V.

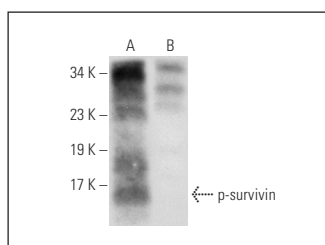
Molecular Weight of p-survivin: 16.5 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



p-survivin (Thr 34)-R: sc-23758-R. Western blot analysis of survivin phosphorylation in untreated (A) and lambda protein phosphatase (sc-200312A) treated (B) HL-60 whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Yamanaka, K., et al. 2011. Antitumor activity of YM155, a selective small-molecule survivin suppressant, alone and in combination with docetaxel in human malignant melanoma models. *Clin. Cancer Res.* 17: 5423-5431.
2. Guo, L., et al. 2012. Epstein-Barr virus oncoprotein LMP1 mediates survivin upregulation by p53 contributing to G<sub>1</sub>/S cell cycle progression in nasopharyngeal carcinoma. *Int. J. Mol. Med.* 29: 574-580.

## RESEARCH USE

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