SANTA CRUZ BIOTECHNOLOGY, INC.

p-Bad (Ser 155): sc-101641

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Phosphorylation of Bad, a pro-apoptotic member of the Bcl-2 protein family, on either Serine 112 or Serine 136 is thought to be necessary and sufficient for growth factors to promote cell survival. Serine 155 is a major site of phosphorylation by protein kinase A (PKA) and serum-induced kinases. Serine 155 phosphorylation requires the prior phosphorylation of Serine 136, which recruits 14-3-3 proteins that then function to increase the accessibility of Serine 155 to survival-promoting kinases. Like Serine 112 and Serine 136, phosphorylation of Serine 155 inhibits the pro-apoptotic function of Bad. Serine 155 phosphorylation disrupts the binding of Bad to prosurvival Bcl-2 proteins and thereby promotes cell survival.

REFERENCES

1. Virdee, K., et al. 2000. Phosphorylation of the pro-apoptotic protein Bad on Serine 155, a novel site, contributes to cell survival. Curr. Biol. 10: 1151-1154.
2. Lawson, A.E., et al. 2000. Phosphatase inhibition promotes antiapoptotic but not proliferative signaling pathways in erythropoietin-dependent HCD57 cells. Blood 96: 2084-2092.
3. Bertolotto, C., et al. 2000. Protein kinase C θ and epsilon promote T-cell survival by a Rsk-dependent phosphorylation and inactivation of Bad. J. Biol. Chem. 275: 37246-37250.
4. Datta, S.R., et al. 2000. 14-3-3 proteins and survival kinases cooperate to inactivate Bad by BH3 domain phosphorylation. Mol. Cell. 6: 41-51.
5. Salomoni, P., et al. 2000. Versatility of BCR/ABL-expressing leukemic cells in circumventing proapoptotic Bad effects. Blood 96: 676-684.
6. Kim, H., et al. 2006. Hierarchical regulation of mitochondrion-dependent apoptosis by Bcl-2 subfamilies. Nat. Cell Biol. 8: 1348-1358.
7. Kuroda, J., et al. 2006. Bim and Bad mediate imatinib-induced killing of Bcr/Abl^{+} leukemic cells, and resistance due to their loss is overcome by a BH3 mimetic. Proc. Natl. Acad. Sci. USA 103: 14907-14912. Erratum in: Proc Natl Acad Sci USA 103: 16614.

CHROMOSOMAL LOCATION

Genetic locus: BAD (human) mapping to 11q13.1; Bad (mouse) mapping to 19 A.

SOURCE

p-Bad (Ser 155) is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated Ser 155 of Bad of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

p-Bad (Ser 155) is recommended for detection of Ser 155 phosphorylated Bad of mouse origin, correspondingly phosphorylated Ser 118 of human origin and correspondingly phosphorylated Ser 156 of rat 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 and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Bad siRNA (h): sc-29778 and Bad siRNA (m): sc-29779.

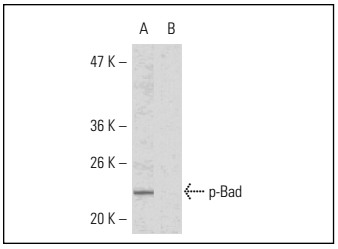
Molecular Weight of p-Bad: 25 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Calyculin-treated HeLa whole cell lysate or forskolin-treated 293 whole cell lysate.

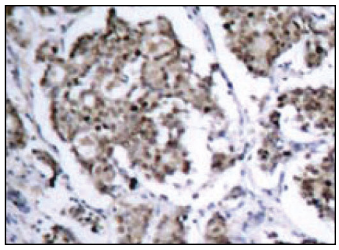
RECOMMENDED SECONDARY REAGENTS

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) 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 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



Western blot analysis of phosphorylated Bad expression in forskolin-treated 293 whole cell lysate (**A**,**B**). Blots were probed with p-Bad (Ser 155): sc-101641 (**A**) and p-Bad (Ser 155): sc-101641 preincubated with cognate phosphorylated peptide (**B**).



p-Bad (Ser 155): sc-101641. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue extract showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. Win, H.Y., et al. 2009. Role of protein kinase C-ι in transformed non-malignant RWPE-1 cells and androgen-independent prostate carcinoma DU-145 cells. Cell Prolif. 42: 182-194.

RESEARCH USE

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