

# p-Bad (F-6): sc-271963

## 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. Salomoni, P., et al. 2000. Versatility of Bcr/Abl-expressing leukemic cells in circumventing proapoptotic Bad effects. *Blood* 96: 676-684.
3. 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.
4. Lawson, A.E., et al. 2000. Phosphatase inhibition promotes antiapoptotic but not proliferative signaling pathways in erythropoietin-dependent HCD57 cells. *Blood* 96: 2084-2092.

## CHROMOSOMAL LOCATION

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

## SOURCE

p-Bad (F-6) is a mouse monoclonal antibody specific for an epitope corresponding to a short amino acid sequence containing Ser 136 phosphorylated Bad of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

p-Bad (F-6) is available conjugated to agarose (sc-271963 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271963 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271963 PE), fluorescein (sc-271963 FITC), Alexa Fluor<sup>®</sup> 488 (sc-271963 AF488), Alexa Fluor<sup>®</sup> 546 (sc-271963 AF546), Alexa Fluor<sup>®</sup> 594 (sc-271963 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-271963 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-271963 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-271963 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271963 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## RESEARCH USE

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

## APPLICATIONS

p-Bad (F-6) is recommended for detection of Ser 136 phosphorylated Bad of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Bad siRNA (h): sc-29778, Bad siRNA (m): sc-29779, Bad shRNA Plasmid (h): sc-29778-SH, Bad shRNA Plasmid (m): sc-29779-SH, Bad shRNA (h) Lentiviral Particles: sc-29778-V and Bad shRNA (m) Lentiviral Particles: sc-29779-V.

Molecular Weight (predicted) of p-Bad: 22 kDa.

Molecular Weight (observed) of p-Bad: 23/28 kDa.

Positive Controls: HeLa + Calyculin A cell lysate: sc-2271.

## SELECT PRODUCT CITATIONS

1. Hu, J., et al. 2012. PI3K p55 $\gamma$  promoter activity enhancement is involved in the anti-apoptotic effect of berberine against cerebral ischemia-reperfusion. *Eur. J. Pharmacol.* 674: 132-142.
2. Luo, D.J., et al. 2014. Knockdown of phosphotyrosyl phosphatase activator induces apoptosis via mitochondrial pathway and the attenuation by simultaneous Tau hyperphosphorylation. *J. Neurochem.* 130: 816-825.
3. Wang, Z., et al. 2014. Tissue kallikrein protects rat hippocampal CA1 neurons against cerebral ischemia/reperfusion-induced injury through the B2R-Raf-MEK1/2-ERK1/2 pathway. *J. Neurosci. Res.* 92: 651-657.
4. Pandey, R.K., et al. 2016. *Leishmania donovani*-induced increase in macrophage Bcl-2 favors parasite survival. *Front. Immunol.* 7: 456.
5. Kalantary-Charvadeh, A., et al. 2019. Micheliolide protects against doxorubicin-induced cardiotoxicity in mice by regulating PI3K/Akt/NF $\kappa$ B signaling pathway. *Cardiovasc. Toxicol.* 19: 297-305.
6. Sugumaran, P., et al. 2020. Prophylactic supplementation of 20-HETE ameliorates hypoxia/reoxygenation injury in pulmonary vascular endothelial cells by inhibiting apoptosis. *Acta Histochem.* 122: 151461.
7. Ceccarelli, M., et al. 2020. Deletion of Btg1 induces Prmt1-dependent apoptosis and increased stemness in Shh-type medulloblastoma cells without affecting tumor frequency. *Front. Oncol.* 10: 226.
8. Sharma, A., et al. 2020. Influenza A virus nucleoprotein activates the JNK stress-signaling pathway for viral replication by sequestering host Filamin A protein. *Front. Microbiol.* 11: 581867.
9. Zhang, W., et al. 2021. Antiviral effectivity of favipiravir against peste des petits ruminants virus is mediated by the JAK/Stat and PI3K/Akt pathways. *Front. Vet. Sci.* 8: 722840.

## STORAGE

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

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