



BH3-Only Protein Detection Set

Cat. No.: PSI-1816



Ψ Specifications

SPECIES REACTIVITY:	Human
IMMUNOGEN:	Rabbit polyclonal antibodies were raised against peptides corresponding to amino acid sequences from each of the corresponding proteins.
TESTED APPLICATIONS:	IF, IHC, WB
APPLICATIONS:	These polyclonal antibodies can be used for detection of Bad, Bid, Bik, Bim, Bmf, Hrk, Noxa and PUMA by immunoblot at 1 - 2 µg/mL and can detect their respective proteins via immunohistochemistry at 1 - 10 µg/mL, and Immunofluorescence.
POSITIVE CONTROL:	<p>1) Bad Antibody: T24 Cell Lysate, Catalog No. 1213</p> <p>Bid Antibody: Mouse Lung Tissue Lysate, Catalog No. 1402</p> <p>Bik Antibody: Jurkat Cell Lysate, Catalog No. 1205</p> <p>Bim Antibody: K562 Cell Lysate, Catalog No. 1204</p> <p>Bmf Antibody: HepG2 Cell Lysate, Catalog No. 1211</p> <p>Hrk Antibody: Mouse Pancreas Tissue Lysate, Catalog No. 1414</p> <p>Noxa Antibody: Human Stomach Tissue Lysate, Catalog No. 1319</p> <p>PUMA Antibody: K562 Cell Lysate, Catalog No. 1204</p>

PURIFICATION:	Antibodies are supplied as affinity chromatography purified IgG.
PHYSICAL STATE:	Liquid
BUFFER:	PBS containing 0.02% sodium azide.
CONCENTRATION:	Antibody 1 mg/mL
STORAGE CONDITIONS:	Stable at 4 °C for three months, store at -20 °C for up to one year.

Ψ Additional Info

USER NOTE:	Optimal dilutions for each application to be determined by the researcher.
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Ψ Background and References

BACKGROUND:	<p>Apoptosis plays a major role in normal organism development, tissue homeostasis, and removal of damaged cells. This process is regulated by the interplay of pro- and anti-apoptotic members of the B-cell lymphoma 2 (Bcl-2) family. The BH3-only (Bcl-2-homology domain 3 only) proteins are a pro-apoptotic subgroup of the Bcl-2 family that are critical initiators of lymphocyte apoptosis and other processes. Unlike the other members of the Bcl-2 family which contain at least two Bcl-2 homology (BH) domains, these proteins contain just one, the BH3 domain. Some of the members of this family, such as Hrk, may show little sequence homology to the others, but all BH-only proteins can bind to at least some pro-survival Bcl-2-like proteins through this BH3 domain and trigger apoptosis when overexpressed. For example, the proteins Bad, Bim and Bmf regulate apoptosis by forming heterodimers with the anti-apoptotic proteins Bcl-2 and Bcl-xL. Bim, Noxa, and PUMA are activated by p53 following DNA damage although the exact mechanisms are not entirely clear. Noxa may also be involved with the activation of Bik, a BH3-only protein whose localization in the endoplasmic reticulum (ER) suggests that Bik may play a role in ER-stress-induced apoptosis. While full-length Bid also promotes apoptosis when expressed, its activity is enhanced following cleavage by enzymes such as caspase-8, suggesting that Bid may play a key role in death-receptor induced apoptosis.</p> <p>For images please see PDF data sheet</p>
REFERENCES:	<p>1) Lockshin RA, Osborne B, and Zakeri Z. Cell death in the third millennium. <i>Cell Death Differ.</i> 2000; 7:2-7.</p> <p>2) Cory S, Huang DCS, and Adams JM. The Bcl-2 family: roles in cell survival and oncogenesis. <i>Oncogene</i> 2003; 22:8590-607.</p> <p>3) Strasser A. The role of BH3-only proteins in the immune systems. <i>Nat. Rev.</i> 2005</p> <p>4) Inohara N, Ding L, Chen S, et al. harakiri, a novel regulator of cell death, encodes a protein that activates apoptosis and interacts selectively with survival-promoting proteins Bcl-2 and Bcl-XL. <i>EMBO J.</i> 1997; 16:1686-94.</p>

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