10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Bak Antibody (BH3 Domain Specific)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1301a

Product Information

Application	IHC-P, WB, E
Primary Accession	Q16611
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB04682
Calculated MW	23409
Antigen Region	56-91

Additional Information

Gene ID	578
Other Names	Bcl-2 homologous antagonist/killer, Apoptosis regulator BAK, Bcl-2-like protein 7, Bcl2-L-7, BAK1, BAK, BCL2L7, CDN1
Target/Specificity	This Bak antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 56-91 amino acids from human Bak.
Dilution	IHC-P~~1:100~500 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Bak Antibody (BH3 Domain Specific) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	BAK1
Synonyms	BAK, BCL2L7, CDN1
Function	Plays a role in the mitochondrial apoptotic process. Upon arrival of cell death signals, promotes mitochondrial outer membrane (MOM) permeabilization by oligomerizing to form pores within the MOM. This

	releases apoptogenic factors into the cytosol, including cytochrome c, promoting the activation of caspase 9 which in turn processes and activates the effector caspases.
Cellular Location	Mitochondrion outer membrane; Single-pass membrane protein
Tissue Location	Expressed in a wide variety of tissues, with highest levels in the heart and skeletal muscle

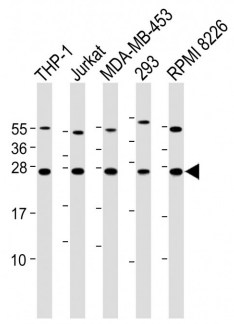
Background

BAK belongs to the BCL2 protein family. BCL2 family members form oligomers or heterodimers and act as anti- or pro-apoptotic regulators that are involved in a wide variety of cellular activities. BAK localizes to mitochondria, and functions to induce apoptosis. It interacts with and accelerates the opening of the mitochondrial voltage-dependent anion channel, which leads to a loss in membrane potential and the release of cytochrome c. This protein also interacts with the tumor suppressor P53 after exposure to cell stress.

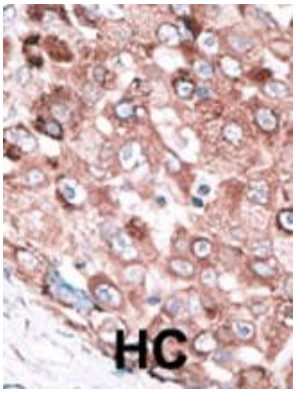
References

Cartron, P.F., et al., Mol. Cell. Biol. 23(13):4701-4712 (2003).
Mikhailov, V., et al., J. Biol. Chem. 278(7):5367-5376 (2003).
Werner, A.B., et al., J. Biol. Chem. 277(25):22781-22788 (2002).
Bellosillo, B., et al., Blood 100(5):1810-1816 (2002).
Grutkoski, P.S., et al., Shock 17(1):47-54 (2002).

Images



All lanes : Anti-hBak-BH3 at 1:2000 dilution Lane 1: THP-1 whole cell lysate Lane 2: Jurkat whole cell lysate Lane 3: MDA-MB-453 whole cell lysate Lane 4: 293 whole cell lysate Lane 5: RPMI 8226 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 23 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

Citations

- Probing BAK and BAX Activation and Pore Assembly with Cytochrome c Release, Limited Proteolysis, and Oxidant-Induced Linkage.
- In vitro cytotoxic effect of proteasome inhibitor bortezomib in combination with purine nucleoside analogues on chronic lymphocytic leukaemia cells.