BACKGROUND

Bcl-2 family proteins regulate and contribute to programmed cell death or apoptosis. It is a large protein family and all members contain at least one of four BH (bcl-2 homology) domains. The Bcl-2 family of proteins governs mitochondrial membrane permeability and can be either pro-apoptotic or anti-apoptotic. To date, a total of 25 genes have been identified in the Bcl-2 family. Some of the anti-apoptotic proteins include Bcl-2, Bcl-x, Bcl-XL, Bcl-XS, Bcl-w, BAG, and some of the pro-apoptotic proteins include Bcl-10, Bax, Bak, Bid, Bad, Bim, Bik, and Blk. These proteins have special significance since they can determine if the cell commits to apoptosis or aborts the process. It is thought that the main mechanism of action of the Bcl-2 family of proteins is the regulation of cytochrome c release from the mitochondria via alteration of mitochondrial membrane permeability. The pro-apoptotic group of Bcl-2 proteins can be further sub-divided into the structurally diverse 'BH3' only proteins (e.g. Bid, Noxa, Puma and Bad) and the multidomain proteins that share BH1 to 3 (e.g. Bax and Bak). Most Bcl-2 family members contain a C-terminal transmembrane domain that functions to target these proteins to the outer mitochondrial and other intracellular membranes.[1]

Bid functions as a death agonist that heterodimerizes with either agonist BAX or antagonist Bcl-2. It counters the protective effect of Bcl-2. It is a mediator of mitochondrial damage induced by caspase-8 (CASP8). CASP8 cleaves Bid, and the COOH-terminal part translocates to mitochondria where it triggers cytochrome c release.[2] Multiple alternatively spliced transcript variants have been found. The major proteolytic product p15 Bid allows the release of cytochrome c. Isoform 1, isoform 2 and isoform 4 induce ICE-like proteases and apoptosis. Isoform 3 does not induce apoptosis.[3]

References:

1. Elmore S.: Toxicol. Pathol. 34:495-516, 2007
2. Willis, S.N. & Adams, J.M.: Curr. Opin. Cell Biol. 17:617-25, 2005
3. Korsmeyer, S.J. et al: Cell death differs. &; 1166-73, 2000

TECHNICAL INFORMATION

Source:
BID Antibody is a mouse monoclonal antibody raised against purified recombinant fragments of human BID expressed in *E. Coli*.

Specificity and Sensitivity:
This antibody detects BID proteins without cross-reactivity with other family members.

Storage Buffer: PBS and 30% glycerol

Storage:
Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

APPLICATIONS

Application:	*Dilution:
WB	1:1000
IP	n/d
IHC	1:50-200
ICC	1:50-200
FACS	1:50-200

**Optimal dilutions must be determined by end user.*

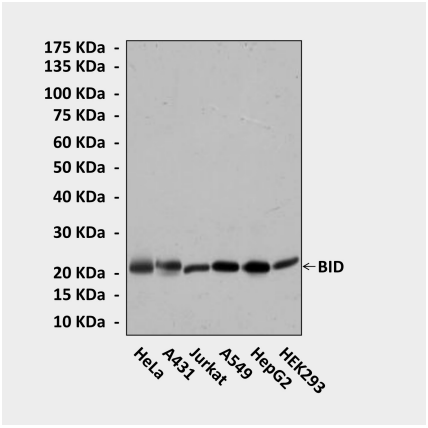
CELL APPLICATIONS, INC.

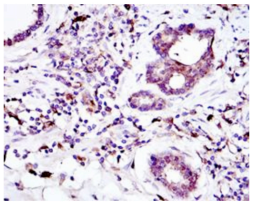
BID Antibody

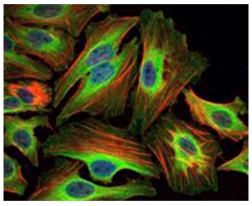
Cat. No. CP10373

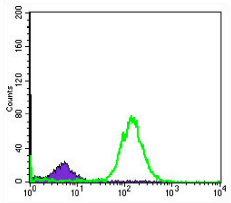
Applications:	**WB, IHC, ICC, FACS**
Detected MW:	**22 kDa**
Species & Reactivity:	**Human**
Isotype:	**Mouse IgG1**

QUALITY CONTROL DATA









Top: Western Blot detection of BID proteins in various cell lysates using BID antibody. **Middle upper:** This antibody stains paraffin-embedded human prostate tissue in immunohistochemical analysis. **Middle lower:** It also stains HeLa cells in confocal immunofluorescent studies (BID antibody: Green; Actin filaments: Red; DRAQ5 DNA Dye: Blue). **Bottom:** This antibody specifically reacts with BID proteins in HeLa cells in FACS assay (BID Antibody: Green; Control: Purple).