



# Rat Anti-BAK1 monoclonal antibody, clone 8E20 (CABT-RM124)

This product is for research use only and is not intended for diagnostic use.

## PRODUCT INFORMATION

<b>Specificity</b>	Detects BAK protein in human and murine species. It binds close to alpha1 region in non-activated BAK.
<b>Target</b>	BAK1
<b>Immunogen</b>	GST-tagged recombinant fragment corresponding to the first 186 amino acids of human BAK.
<b>Isotype</b>	IgG2a, κ
<b>Source/Host</b>	Rat
<b>Species Reactivity</b>	Human
<b>Clone</b>	8E20
<b>Purification</b>	Protein G purified
<b>Conjugate</b>	unconjugated
<b>Applications</b>	IP, FuncS, WB
<b>Molecular Weight</b>	~24 kDa observed; 23.41 kDa calculated. Uncharacterized bands may be observed in some lysate(s).
<b>Format</b>	Liquid
<b>Size</b>	100 µl
<b>Buffer</b>	PBS
<b>Preservative</b>	None

<b>Storage</b>	Stable for 1 year at -20°C from date of receipt. Handling Recommendations: Upon receipt and prior to removing the cap, centrifuge the vial and gently mix the solution. Aliquot into microcentrifuge tubes and store at -20°C. Avoid repeated freeze/thaw cycles, which may damage IgG and affect product performance.
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## BACKGROUND

<b>Introduction</b>	Bcl-2 homologous antagonist/killer is encoded by the BAK1 gene in human. BAK is a single-pass membrane protein of the Bcl-2 family that is expressed in a wide variety of tissues, with highest levels displayed in heart and skeletal muscle. BAK plays a significant role in the mitochondrial apoptotic process. In non-apoptotic cells, BAK constitutively resides in the mitochondrial outer membrane, but upon arrival of cell death signals, it promotes mitochondrial outer membrane (MOM) permeabilization by oligomerizing to form pores within the MOM and releases apoptogenic factors into the cytosol, including cytochrome c, promoting the activation of caspase 9. BAK contains three BH motifs (BH1: aa 117-136; BH2: aa 169-184; and BH3: aa 74-88) and intact BH3 motif is required by BIK, BID, BAD, and BAX for their pro-apoptotic activity and their interaction with anti-apoptotic members of the Bcl-2 family. This antibody binds close to the alpha1 region in non-activated BAK to induce conformational change, oligomerization, and cytochrome c release. Its binding to BAK is shown to directly impact alpha1, but not alpha2 region. A short sequence (aa 51-55) is shown to be essential for binding of this antibody.
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<b>Keywords</b>	BAK1; BCL2-antagonist/killer 1; BAK; CDN1; BCL2L7; BAK-LIKE; bcl-2 homologous antagonist/killer; bcl2-L-7; BCL2-like 7 protein; bcl-2-like protein 7; apoptosis regulator BAK; pro-apoptotic protein BAK
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## GENE INFORMATION

<b>Entrez Gene ID</b>	<a href="#">578</a>
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<b>UniProt ID</b>	<a href="#">Q16611</a>
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