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

Bit1 Antibody

Catalog # ASC10354

Product Information

Application	WB, IF, ICC, E
Primary Accession	Q9Y3E5
Other Accession	NP_057161, 7706351
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	19194
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	Bit1 antibody can be used for the detection of Bit1 by Western blot at 1 - 4 g/mL. Antibody can also be used for immunocytochemistry starting at 2 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	51651
Other Names	Bit1 Antibody: BIT1, PTH2, CGI-147, BIT1, Peptidyl-tRNA hydrolase 2, mitochondrial, Bcl-2 inhibitor of transcription 1, PTH 2, peptidyl-tRNA hydrolase 2
Target/Specificity	PTRH2;
Reconstitution & Storage	Bit1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	Bit1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PTRH2
Synonyms	BIT1, PTH2
Function	Peptidyl-tRNA hydrolase which releases tRNAs from the ribosome during protein synthesis (PubMed:14660562). Promotes caspase- independent apoptosis by regulating the function of two transcriptional regulators, AES and TLE1.
Cellular Location	Mitochondrion outer membrane; Single-pass membrane protein

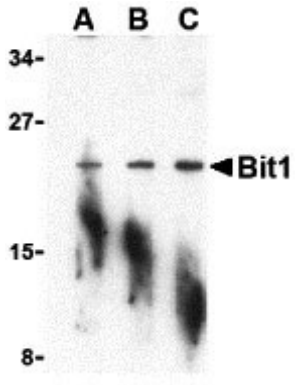
Background

Bit1 Antibody: Adhesion to extracellular matrix regulates cell survival through both integrin engagement and appropriate cell spreading. Anoikis is the molecular mechanism of apoptosis induced by integrin detachment. Bit1 (Bcl-2 inhibitor of transcription 1) was recently identified as being involved in this process. Bit1 is a mitochondrial protein that is released into the cytoplasm upon onset of apoptosis where it forms a complex with AES, a small Groucho/transducin-like enhancer of split (TLE) protein and induces caspase-independent apoptosis. Both AES and TLE proteins are transcriptional co-repressors that play important roles in neurogenesis, segmentation, and sex determination. It has been suggested that Bit1-AES complexes turn off a survival-promoting gene transcription program controlled by TLE. Interestingly, apoptosis of cells transfected with Bit1 and AES could be inhibited if the cells were allowed to attach to fibronectin through the alpha5beta1 integrin suggesting that the Bit1-AES pathway contributing to anoikis is regulated by integrins, and in particular, the alpha5beta1 integrin.

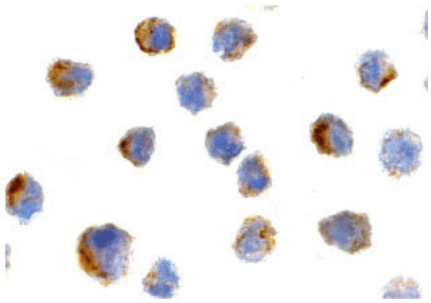
References

Martin SS and Vuori K. Regulation of Bcl-2 proteins during anoikis and amorphosis. Biochim Biophys Acta. 2004; 1692:145-57.

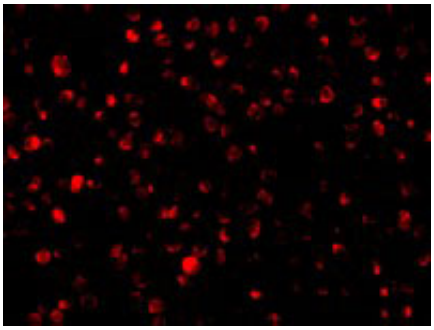
Images



Western blot analysis of Bit1 in A-20 cell lysate with Bit1 antibody at (A) 1, (B) 2, and (C) 4 µg/mL.



Immunocytochemistry of Bit1 in 3T3 cells with Bit1 antibody at 2 µg/mL.



Immunofluorescence of Bit1 in 3T3 cells with Bit1 antibody at 20 µg/mL.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.