

**Mouse Monoclonal Antibody to BNIP3**  
**Purified Mouse Monoclonal Antibody**  
**Catalog # AO2406a****Specification**

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**Mouse Monoclonal Antibody to BNIP3 - Product Information**

Application	E, WB, FC, ICC, IHC
Primary Accession	<a href="#">Q12983</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse IgG2a
Calculated MW	21.5kDa KDa

**Description**

This gene encodes a mitochondrial protein that contains a BH3 domain and acts as a pro-apoptotic factor. The encoded protein interacts with anti-apoptotic proteins, including the E1B 19 kDa protein and Bcl2. This gene is silenced in tumors by DNA methylation.;

**Immunogen**

Purified recombinant fragment of human BNIP3 (AA: 50-155) expressed in E. Coli.

**Formulation**

Purified antibody in PBS with 0.05% sodium azide

**Application Note**

ELISA: 1/10000; WB: 1/500 - 1/2000; IHC: 1/200 - 1/1000; ICC: 1/50 - 1/250; FCM: 1/200 - 1/400

**Mouse Monoclonal Antibody to BNIP3 - Additional Information**

**Gene ID** 664

**Other Names**

NIP3

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Mouse Monoclonal Antibody to BNIP3 is for research use only and not for use in diagnostic or therapeutic procedures.

**Mouse Monoclonal Antibody to BNIP3 - Protein Information**

**Name** BNIP3 ([HGNC:1084](#))

**Synonyms** NIP3

### Function

Apoptosis-inducing protein that can overcome BCL2 suppression. May play a role in repartitioning calcium between the two major intracellular calcium stores in association with BCL2. Involved in mitochondrial quality control via its interaction with SPATA18/MIEAP: in response to mitochondrial damage, participates in mitochondrial protein catabolic process (also named MALM) leading to the degradation of damaged proteins inside mitochondria. The physical interaction of SPATA18/MIEAP, BNIP3 and BNIP3L/NIX at the mitochondrial outer membrane regulates the opening of a pore in the mitochondrial double membrane in order to mediate the translocation of lysosomal proteins from the cytoplasm to the mitochondrial matrix. Plays an important role in the calprotectin (S100A8/A9)-induced cell death pathway.

### Cellular Location

Mitochondrion. Mitochondrion outer membrane; Single-pass membrane protein.

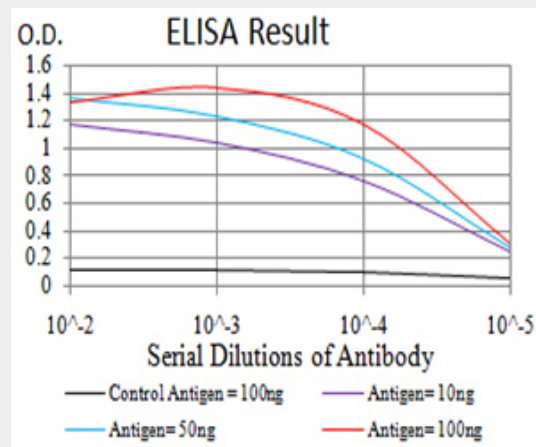
Note=Coexpression with the EIB 19-kDa protein results in a shift in NIP3 localization pattern to the nuclear envelope. Colocalizes with ACAA2 in the mitochondria. Colocalizes with SPATA18 at the mitochondrion outer membrane

### Mouse Monoclonal Antibody to BNIP3 - Protocols

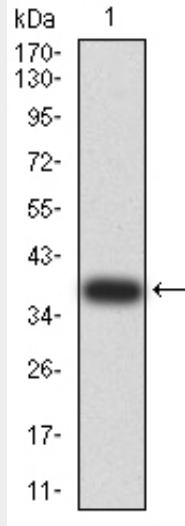
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

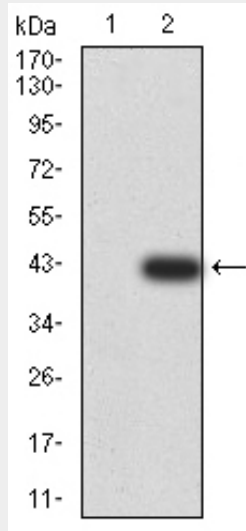
### Mouse Monoclonal Antibody to BNIP3 - Images



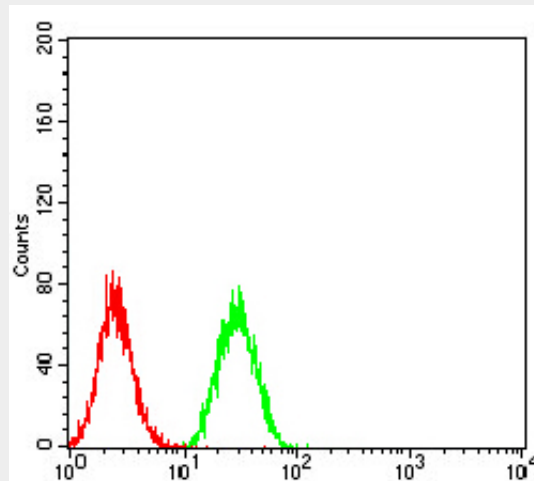
Black line: Control Antigen (100 ng); Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line: Antigen (100 ng)



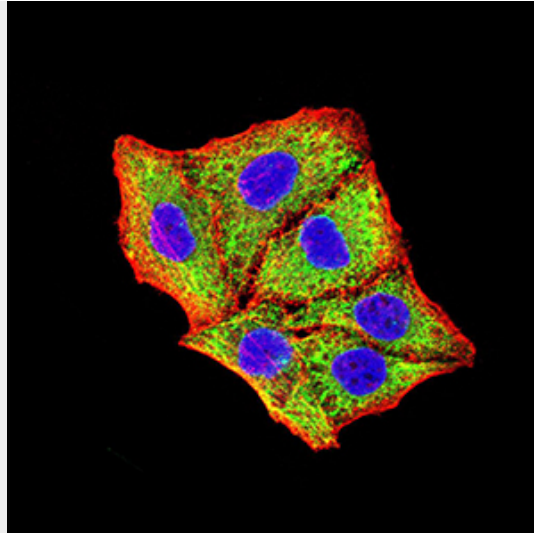
Western blot analysis using BNIP3 mAb against human BNIP3 (AA: 50-155) recombinant protein. (Expected MW is 38 kDa)



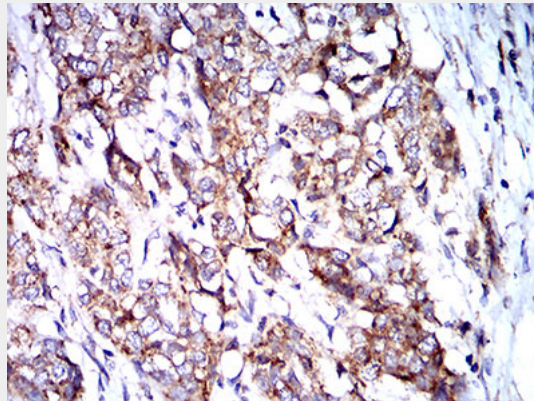
Western blot analysis using BNIP3 mAb against HEK293 (1) and BNIP3 (AA: 50-155)-hIgGfC transfected HEK293 (2) cell lysate.



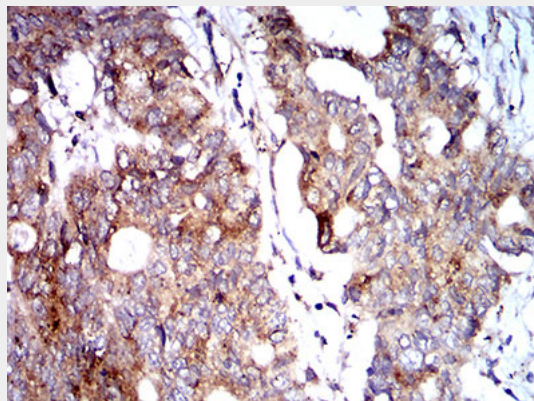
Flow cytometric analysis of HeLa cells using BNIP3 mouse mAb (green) and negative control (red).



Immunofluorescence analysis of HeLa cells using BNIP3 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor- 555 phalloidin. Secondary antibody from Fisher



Immunohistochemical analysis of paraffin-embedded breast cancer tissues using BNIP3 mouse mAb with DAB staining.



Immunohistochemical analysis of paraffin-embedded rectum cancer tissues using BNIP3 mouse mAb with DAB staining.

#### **Mouse Monoclonal Antibody to BNIP3 - References**

1. Tumour Biol. 2015 Jun;36(6):4731-40. ;
2. PLoS One. 2014 May 13;9(5):e96733. ;