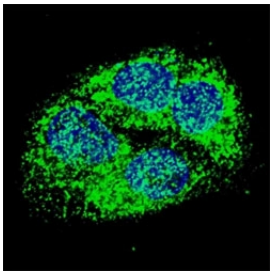
BNIP3 Antibody / Hypoxia-Induced Apoptosis Protein Antibody (F42817)

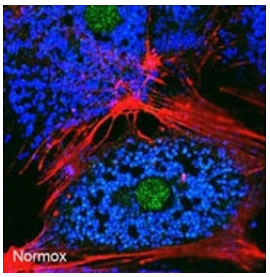
Catalog No.	Formulation	Size
F42817-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F42817-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

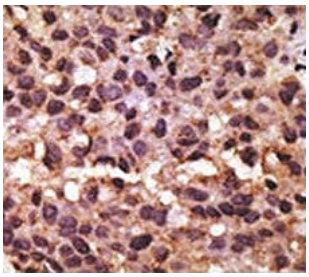
Availability	1-3 business days
Species Reactivity	Human, Mouse
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Purified
UniProt	Q12983
Applications	Western blot: 1:1000 Immunofluorescence: 1:50-1:100 IHC (Paraffin): 1:50-1:100
Limitations	This BNIP3 Antibody / Hypoxia-Induced Apoptosis Protein Antibody is available for research use only.



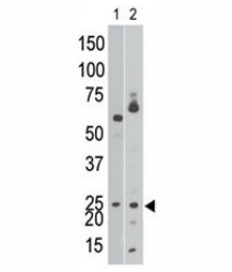
BNIP3 Antibody HepG2 Cell IF. Immunofluorescent confocal staining of HepG2 cells was performed with BNIP3 Antibody / Hypoxia-Induced Apoptosis Protein Antibody at a 1:50 dilution. The image demonstrates prominent punctate cytoplasmic staining with a perinuclear distribution, consistent with the expected localization of BNIP3 to the outer mitochondrial membrane, while nuclei are counterstained in blue. This BNIP3 Antibody supports immunofluorescence studies of hypoxia-induced apoptosis, mitophagy, mitochondrial homeostasis, and cellular stress responses.



BNIP3 Antibody Mouse Hepatocyte IF. Immunofluorescent staining of freshly isolated mouse hepatocytes cultured under normoxic conditions for 6 hours was performed with BNIP3 Antibody / Hypoxia-Induced Apoptosis Protein Antibody (green), together with F-actin (red) and ATP synthase (blue). The image demonstrates punctate cytoplasmic BNIP3 staining with a distribution consistent with mitochondrial localization, while F-actin outlines the cytoskeleton. This BNIP3 Antibody supports immunofluorescence studies of hypoxia-induced apoptosis, mitophagy, mitochondrial homeostasis, and cellular stress responses.



BNIP3 Antibody Human Breast Carcinoma IHC. FFPE human breast carcinoma tissue was stained with BNIP3 Antibody / Hypoxia-Induced Apoptosis Protein Antibody. The image demonstrates moderate to strong predominantly cytoplasmic staining in malignant epithelial cells with relatively low background staining in the surrounding tissue, consistent with the expected localization of BNIP3. This BNIP3 Antibody supports immunohistochemical studies of hypoxia-induced apoptosis, mitophagy, mitochondrial homeostasis, and BNIP3 expression in breast cancer.



BNIP3 Antibody Ramos Cell and Mouse Brain WB. Western blot analysis of BNIP3 Antibody / Hypoxia-Induced Apoptosis Protein Antibody detected a prominent band at approximately 19-21 kDa, consistent with the expected molecular weight of BNIP3. Lanes: (1) human Ramos cell lysate and (2) mouse brain tissue lysate. An additional higher molecular weight band is observed in the mouse brain sample, which may represent SDS-resistant BNIP3 dimers or higher-order oligomeric forms that have been reported for this mitochondrial membrane protein. This BNIP3 Antibody supports western blot studies of hypoxia-induced apoptosis, mitophagy, and mitochondrial homeostasis in human and mouse samples.

Description

BNIP3 Antibody / Hypoxia-Induced Apoptosis Protein Antibody is designed for the study of a mitochondrial protein that plays central roles in hypoxia-induced cell death, mitophagy, and cellular adaptation to metabolic stress. BNIP3 is a pro-apoptotic member of the BCL2 protein family that is strongly induced by hypoxia through hypoxia-inducible factor 1 signaling. Localized primarily to the outer mitochondrial membrane, BNIP3 regulates mitochondrial integrity by promoting selective mitochondrial turnover, influencing apoptosis, and coordinating cellular responses to oxygen deprivation. These activities allow BNIP3 to function as an important regulator of mitochondrial quality control and energy homeostasis.

Under physiological conditions, BNIP3 expression is relatively low in many cell types but increases rapidly during hypoxia, ischemia, nutrient deprivation, and other forms of cellular stress. Through interactions with anti-apoptotic BCL2 family proteins and components of the autophagy machinery, BNIP3 can promote mitochondrial depolarization, mitophagy, and programmed cell death depending on the cellular context. Its LC3-interacting region enables recruitment of autophagic membranes to damaged mitochondria, making BNIP3 a key mediator linking hypoxia signaling with mitochondrial quality control. Consequently, BNIP3 has become an important biomarker in studies of autophagy, mitochondrial biology, and cellular stress responses.

Altered BNIP3 expression has been associated with numerous diseases including ischemic injury, heart disease, neurodegenerative disorders, liver disease, and many human cancers. In tumors, BNIP3 may function either as a tumor suppressor or as a survival factor depending on the tissue type and microenvironment, particularly within hypoxic tumor regions. Its expression has therefore been investigated as both a prognostic biomarker and a potential therapeutic target in oncology. Continued research is expanding understanding of how BNIP3 regulates apoptosis, mitophagy, and metabolic adaptation during development and disease.

An BNIP3 Antibody is a valuable reagent for detecting endogenous BNIP3 by western blotting, immunohistochemistry,

immunofluorescence, immunoprecipitation, and related laboratory applications. A Hypoxia-Induced Apoptosis Protein Antibody supports investigations of mitochondrial homeostasis, hypoxia signaling, autophagy, programmed cell death, and cancer biology.

Researchers investigating hypoxia signaling, mitochondrial dysfunction, apoptosis, and tumor progression may also be interested in exploring our Cancer Marker Antibodies page for additional validated research antibodies.

Application Notes

Titration of the BNIP3 Antibody / Hypoxia-Induced Apoptosis Protein Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 152-187 from the human protein (BH3 domain) was used as the immunogen for this BNIP3 antibody.

Storage

Aliquot the BNIP3 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

BNIP3 Antibody for research on hypoxia signaling, apoptosis, mitophagy and mitochondrial homeostasis in cancer and stress biology - NSJ Bioreagents.

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