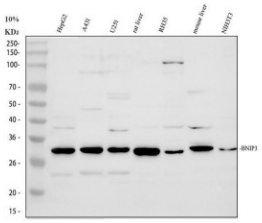
BNIP3 Antibody / BCL2 Interacting Protein 3 Antibody (RQ4194)

Catalog No.	Formulation	Size
RQ4194	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q12983
Applications	Western Blot : 0.5-1ug/ml
Limitations	This BNIP3 antibody is available for research use only.



BNIP3 Antibody Human, Rat and Mouse WB. Western blot analysis of BNIP3 Antibody / BCL2 Interacting Protein 3 Antibody detected a prominent band at approximately 28â€“30 kDa across human, rat, and mouse samples, compared with the predicted molecular weight of approximately 22 kDa. Lanes: (1) human HepG2, (2) human A431, (3) human U251, (4) rat liver, (5) rat RH35, (6) mouse liver, and (7) mouse NIH/3T3 lysates. The slightly slower migration is consistent with the known electrophoretic behavior of BNIP3, a mitochondrial membrane protein whose hydrophobic transmembrane domain and post-translational modifications can alter apparent molecular weight during SDS-PAGE. This BNIP3 Antibody supports western blot studies of BCL2 Interacting Protein 3, mitochondrial homeostasis, mitophagy, and hypoxia-responsive signaling.

Description

BNIP3 Antibody / BCL2 Interacting Protein 3 Antibody recognizes BNIP3, a mitochondrial outer membrane protein belonging to the BH3-only subgroup of the BCL2 family. BNIP3 regulates mitochondrial quality control by integrating apoptotic signaling with autophagy and mitophagy pathways. Although originally identified through its interaction with anti-apoptotic BCL2 family members, BNIP3 is now recognized as an important mediator of mitochondrial turnover, metabolic

adaptation, and cellular responses to environmental stress. Its expression is strongly influenced by hypoxia-inducible signaling, allowing cells to adjust mitochondrial function during periods of reduced oxygen availability.

BNIP3 promotes selective elimination of damaged mitochondria through receptor-mediated mitophagy by interacting directly with LC3 family proteins on autophagosomes. Depending on cellular context, BNIP3 can preserve cell viability by maintaining a healthy mitochondrial population or contribute to programmed cell death through mitochondrial dysfunction and activation of apoptotic pathways. This balance between survival and death makes BNIP3 an important regulator of cellular homeostasis in metabolically active tissues including the heart, liver, skeletal muscle, and nervous system.

Alterations in BNIP3 expression have been linked to ischemic injury, cardiovascular disease, neurodegeneration, chronic liver disease, and numerous cancers. In oncology, BNIP3 expression frequently reflects the hypoxic tumor microenvironment and has been associated with tumor progression, therapeutic response, and patient prognosis. Ongoing research continues to define how BNIP3 contributes to mitochondrial remodeling, metabolic reprogramming, autophagy, and disease progression across multiple organ systems.

An BNIP3 Antibody is a valuable reagent for detecting endogenous BNIP3 by western blotting, immunohistochemistry, immunofluorescence, immunoprecipitation, and related laboratory applications. A BCL2 Interacting Protein 3 Antibody supports investigations of mitochondrial biology, mitophagy, apoptosis, hypoxia signaling, and cellular stress responses.

For additional information about BNIP3 function, hypoxia-responsive signaling, and the full research applications of this target, see our BNIP3 Antibody / Hypoxia-Induced Apoptosis Protein Antibody page.

Application Notes

Optimal dilution of the BNIP3 antibody should be determined by the researcher.

Immunogen

Amino acids KEFLFKHPKRTATLSMRNTSVMKK were used as the immunogen for the BNIP3 antibody.

Storage

After reconstitution, the BNIP3 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

BNIP3 antibody, BCL2 Interacting Protein 3 antibody, NIP3 antibody, BCL2/Adenovirus E1B 19 kDa Protein-Interacting Protein 3 antibody

Copyright © NSJ Bioreagents. All rights reserved.