Revision 1

Store at -20C

#9089

BNIP3L/Nix Antibody

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H M	Endogenous	38, 80	Rabbit	#O60238	665

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

BNIP3L/Nix Antibody recognizes endogenous levels of total BNIP3L/Nix protein.

Species predicted to react based on 100% sequence homology

Rat

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Glu128 of human BNIP3L/Nix protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

BCL2/Adenovirus E1B 19 kDa protein-interacting protein 3-like (BNIP3L) (1), also termed BNIP3α (2), B5 (3), and Nix (4), is a member of the Bcl-2 family of apoptotic regulators with highest homology to BNIP3. BNIP3L can bind BNIP3, Bcl-x_L, and Bcl-2 (1-5). BNIP3L forms homodimers that withstand denaturing by SDS and reducing conditions (5). BNIP3L is a mitochondrial protein and knockout studies suggest that BNIP3L regulates autophagic clearance of damaged mitochondria during erythroid maturation via mitochondrial autophagy (6,7). It has been shown that the expression of BNIP3L is up-regulated during terminal erythroid differentiation (6-8), as well as in tumor cell lines during hypoxia (9-11). BNIP3L directly regulates the elimination of mitochondria through its ability to bind to and recruit important components of the autophagic machinery, including LC3/Atg8 and GABARAP proteins, via its amino-terminal LC3-interacting region (LIR) (12). BNIP3L may also indirectly activate phagophore formation either via the recruitment of autophagy proteins or by binding Bcl-x_L, which in turn releases Beclin-1 (13). BNIP3L/Nix also plays a pivotal role in Parkin-mediated mitochondrial autophagy via its ability to mediate the mitochondrial translocation of Parkin (14). Activated BNIP3L can promote the opening of mitochondrial permeability transition pores resulting in mitochondrial depolarization, generation of reactive oxygen species, and induction of necrosis. Due to its involvement in cell death and autophagy, research scientists have implicated BNIP3L in heart disease and cancer (13).

Background References

1. Matsushima, M. et al. (1998) *Genes Chromosomes Cancer* 21, 230-5.
2. Yasuda, M. et al. (1999) *Cancer Res* 59, 533-7.
3. Ohi, N. et al. (1999) *Cell Death Differ* 6, 314-25.
4. Chen, G. et al. (1999) *J Biol Chem* 274, 7-10.
5. Imazu, T. et al. (1999) *Oncogene* 18, 4523-9.
6. Schweers, R.L. et al. (2007) *Proc Natl Acad Sci USA* 104, 19500-5.
7. Sandoval, H. et al. (2008) *Nature* 454, 232-5.
8. Aerbajinai, W. et al. (2003) *Blood* 102, 712-7.
9. Sowter, H.M. et al. (2001) *Cancer Res* 61, 6669-73.
10. Bruick, R.K. (2000) *Proc Natl Acad Sci USA* 97, 9082-7.
11. Fei, P. et al. (2004) *Cancer Cell* 6, 597-609.
12. Novak, I. et al. (2010) *EMBO Rep* 11, 45-51.
13. Zhang, J. and Ney, P.A. (2009) *Cell Death Differ* 16, 939-46.
14. Ding, W.X. et al. (2010) *J Biol Chem* 285, 27879-90.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.