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

BANP Antibody

Catalog # ASC11203

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q8N9N5
Other Accession	NP_001167014, 291084803
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	56494
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	BANP antibody can be used for detection of BANP by Western blot at 1 - 2 g/mL. Antibody can also be used for immunohistochemistry starting at 10 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	54971
Other Names	Protein BANP, BEN domain-containing protein 1, Btg3-associated nuclear protein, Scaffold/matrix-associated region-1-binding protein, BANP, BEND1, SMAR1
Target/Specificity	BANP;
Reconstitution & Storage	BANP 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	BANP Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	BANP
Synonyms	BEND1, SMAR1
Function	Controls V(D)J recombination during T-cell development by repressing T-cell receptor (TCR) beta enhancer function (By similarity). Binds to scaffold/matrix attachment region beta (S/MARbeta), an ATC-rich DNA sequence located upstream of the TCR beta enhancer (By similarity). Represses cyclin D1 transcription by recruiting HDAC1 to its promoter, thereby diminishing H3K9ac, H3S10ph and H4K8ac levels (PubMed:16166625). Promotes TP53

	activation, which causes cell cycle arrest (By similarity). Plays a role in the regulation of alternative splicing (PubMed:26080397). Binds to CD44 pre-mRNA and negatively regulates the inclusion of CD44 proximal variable exons v2-v6 but has no effect on distal variable exons v7-v10 (PubMed:26080397).
Cellular Location	Nucleus. Nucleus speckle. Cytoplasm Note=Primarily nuclear but translocates to the cytoplasm following MAPK1/MAPK3-mediated phosphorylation.
Tissue Location	Down-regulated in breast cancer cell lines.

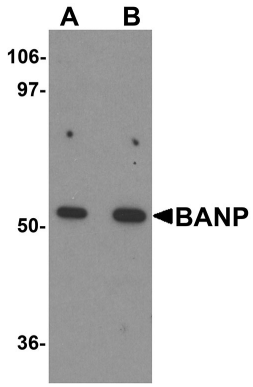
Background

BANP Antibody: BANP was initially identified as a binding protein to BTG3 in a yeast two-hybrid screen. BANP acts as a tumor suppressor by stabilizing p53 expression and leading to cell cycle arrest. p53 in turn binds to upstream elements of the BANP promoter, thereby forming a feedback loop. BANP is down-regulated in advanced stages of human breast cancer, and its overexpression in breast cancer cell lines inhibits their ability to metastasize by modulating TGF-beta signaling. Furthermore, BANP can modulate NF-κB transactivation and can inhibit tumorigenesis by regulating NF-κB target genes. Recent experiments have shown that BANP can also repress HIV-1 LTR mediated transcription by tethering the LTR matrix attachment region to nuclear matrix.

References

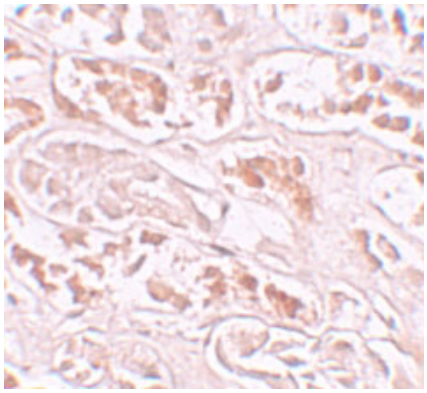
Birot A, Duret L, Bartholin L, et al. Identification and molecular analysis of BANP. Gene2000; 253:189-96.
Kaul R, Mukherjee S, Ahmed F, et al. Direct interaction with and activation of p53 by SMAR1 retards cell-cycle progression at G2/M phase and delays tumor growth in mice. Int. J. Cancer2003; 103:606-15.
Singh K, Mogare D, Giridharagopalan RO, et al. P%3 target gene SMAR1 is dysregulated in breast cancer: its role in cancer cell migration and invasion. PLoS One2007; 2:e660.
Signh K, Sinha S, Malonia SK, et al. Tumor suppressor SMAR1 repsses IkBa expression and inhibits p65 transactivation through matrix attachment regions. J. Biol. Chem.2009; 284:1267-78.

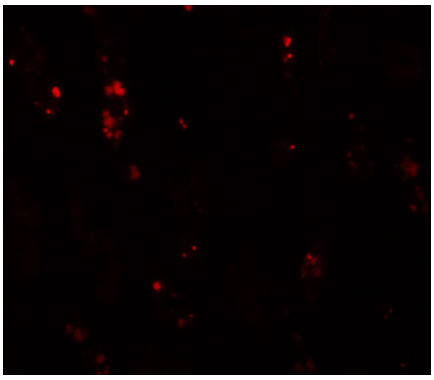
Images



Western blot analysis of BANP in mouse kidney tissue lysate with BANP antibody at (A) 1 and (B) 2 µg/mL.

Immunohistochemistry of BANP in human kidney tissue with BANP antibody at 10 µg/mL.





Immunofluorescence of BANP in human kidney tissue with BANP antibody at 20 µg/mL.