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BANF1 Antibody (Center)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP14071c

Specification

BANF1 Antibody (Center) - Product Information

Application	**IHC-P, WB,E**
Primary Accession	O75531
Other Accession	Q9R1T1, O54962, P61283, NP_001137457.1, NP_003851.1
Reactivity	**Human**
Predicted	**Bovine, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**10059**
Antigen Region	**37-65**

BANF1 Antibody (Center) - Additional Information

Gene ID 8815

Other Names
Barrier-to-autointegration factor, Breakpoint cluster region protein 1, Barrier-to-autointegration factor, N-terminally processed, BANF1, BAF, BCRG1

Target/Specificity
This BANF1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 37-65 amino acids from the Central region of human BANF1.

Dilution
IHC-P~~1:10~50
WB~~1:1000
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

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

Precautions
BANF1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

BANF1 Antibody (Center) - Protein Information

Name BANF1 {ECO:0000303|PubMed:21549337, ECO:0000312|HGNC:HGNC:17397}

Function Non-specific DNA-binding protein that plays key roles in mitotic nuclear reassembly, chromatin organization, DNA damage response, gene expression and intrinsic immunity against foreign DNA (PubMed:10908652, PubMed:11792822, PubMed:12163470, PubMed:18005698, PubMed:25991860, PubMed:28841419, PubMed:31796734, PubMed:32792394). Contains two non-specific double-stranded DNA (dsDNA)-binding sites which promote DNA cross-bridging (PubMed:9465049). Plays a key role in nuclear membrane reformation at the end of mitosis by driving formation of a single nucleus in a spindle-independent manner (PubMed:28841419). Transiently cross-bridges anaphase chromosomes via its ability to bridge distant DNA sites, leading to the formation of a dense chromatin network at the chromosome ensemble surface that limits membranes to the surface (PubMed:28841419). Also acts as a negative regulator of innate immune activation by restricting CGAS activity toward self-DNA upon acute loss of nuclear membrane integrity (PubMed:32792394). Outcompetes CGAS for DNA-binding, thereby preventing CGAS activation and subsequent damaging autoinflammatory responses (PubMed:32792394). Also involved in DNA damage response: interacts with PARP1 in response to oxidative stress, thereby inhibiting the ADP-ribosyltransferase activity of PARP1 (PubMed:31796734). Involved in the recognition of exogenous dsDNA in the cytosol: associates with exogenous dsDNA immediately after its appearance in the cytosol at endosome breakdown and is required to avoid autophagy (PubMed:25991860). In case of poxvirus infection, has an antiviral activity by blocking viral DNA replication (PubMed:18005698).

Cellular Location
Nucleus. Chromosome. Nucleus envelope. Cytoplasm. Note=Significantly enriched at the nuclear inner membrane, diffusely throughout the nucleus during interphase and concentrated at the chromosomes during the M-phase (PubMed:16495336, PubMed:24600006). The phosphorylated form (by VRK1) shows a cytoplasmic localization whereas the unphosphorylated form locates almost exclusively in the nucleus (PubMed:16495336, PubMed:24600006). May be included in HIV-1 virions via its interaction with viral GAG polyprotein (PubMed:14645565)

Tissue Location
Widely expressed. Expressed in colon, brain, heart, kidney, liver, lung, ovary, pancreas, placenta, prostate, skeletal muscle, small intestine, spleen and testis. Not detected in thymus and peripheral blood leukocytes.

BANF1 Antibody (Center) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

BANF1 Antibody (Center) - Images

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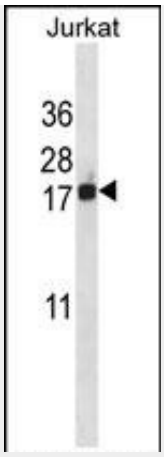
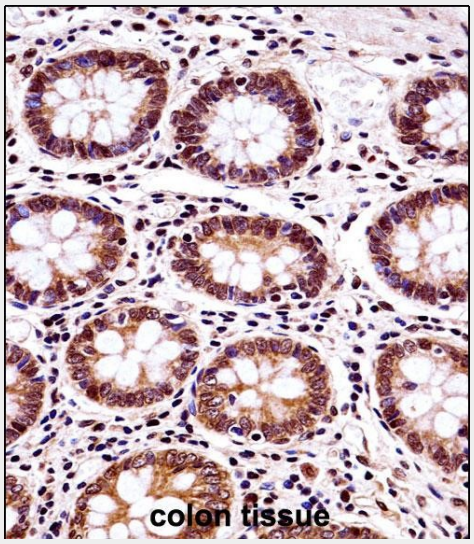


BANF1 Antibody (Center) (Cat. #AP14071c) western blot analysis in Jurkat cell line lysates (35ug/lane).This demonstrates the BANF1 antibody detected the BANF1 protein (arrow).



BANF1 Antibody (Center) (AP14071c)immunohistochemistry analysis in formalin fixed and paraffin embedded human colon tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of BANF1 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.

BANF1 Antibody (Center) - Background

The protein encoded by this gene was first identified by its ability to protect retroviruses from intramolecular integration and therefore promote intermolecular integration into the host cell genome. The protein forms a homodimer which localizes to both the nucleus and cytoplasm and is specifically associated with chromosomes during mitosis. This protein binds to double stranded DNA in a non-specific manner and also binds to LEM-domain containing proteins of the nuclear envelope. This protein is thought to facilitate nuclear reassembly by binding with both DNA and inner nuclear membrane proteins and thereby recruit chromatin to the nuclear periphery. Alternative splicing results in multiple transcript variants encoding the same protein.

BANF1 Antibody (Center) - References

Montes de Oca, R., et al. PLoS ONE 4 (9), E7050 (2009) :
Haraguchi, T., et al. J. Cell. Sci. 121 (PT 15), 2540-2554 (2008) :
Haraguchi, T., et al. J. Cell. Sci. 120 (PT 12), 1967-1977 (2007) :
Wiebe, M.S., et al. Cell Host Microbe 1(3):187-197(2007)
Bengtsson, L., et al. Mol. Biol. Cell 17(3):1154-1163(2006)