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BANF1 / BAF / BCRP1 Antibody (C-Terminus)

Rabbit Polyclonal Antibody
Catalog # ALS11662

Specification

BANF1 / BAF / BCRP1 Antibody (C-Terminus) - Product Information

Application	**IHC**
Primary Accession	O75531
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**10kDa KDa**

BANF1 / BAF / BCRP1 Antibody (C-Terminus) - 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
15 amino acid peptide from near the carboxy terminus of human BANF1.

Reconstitution & Storage
Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles. Store undiluted.

Precautions
BANF1 / BAF / BCRP1 Antibody (C-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

BANF1 / BAF / BCRP1 Antibody (C-Terminus) - 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:<a href="http://www.uniprot.org/citations/9465049"

target="_blank">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.

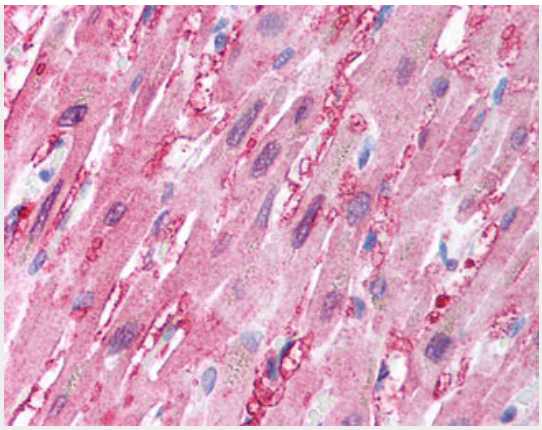
BANF1 / BAF / BCRP1 Antibody (C-Terminus) - Protocols

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 / BAF / BCRP1 Antibody (C-Terminus) - Images

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Anti-BANF1 antibody IHC of human heart.

BANF1 / BAF / BCRP1 Antibody (C-Terminus) - Background

Plays fundamental roles in nuclear assembly, chromatin organization, gene expression and gonad development. May potently compress chromatin structure and be involved in membrane recruitment and chromatin decondensation during nuclear assembly. Contains 2 non-specific dsDNA-binding sites which may promote DNA cross-bridging. Exploited by retroviruses for inhibiting self- destructing autointegration of retroviral DNA, thereby promoting integration of viral DNA into the host chromosome. EMD and BAF are cooperative cofactors of HIV-1 infection. Association of EMD with the viral DNA requires the presence of BAF and viral integrase. The association of viral DNA with chromatin requires the presence of BAF and EMD.

BANF1 / BAF / BCRP1 Antibody (C-Terminus) - References

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Harris D.,et al.J. Biol. Chem. 275:39671-39677(2000).