

BANF1 / BAF / BCRP1 Antibody (clone 3F10-4G12)
Mouse Monoclonal Antibody
Catalog # ALS13446**Specification****BANF1 / BAF / BCRP1 Antibody (clone 3F10-4G12) - Product Information**

Application	WB, IHC
Primary Accession	O75531
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Calculated MW	10kDa KDa

BANF1 / BAF / BCRP1 Antibody (clone 3F10-4G12) - 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

Reconstitution & Storage

Store at -20°C. Aliquot to avoid freeze/thaw cycles.

Precautions

BANF1 / BAF / BCRP1 Antibody (clone 3F10-4G12) is for research use only and not for use in diagnostic or therapeutic procedures.

BANF1 / BAF / BCRP1 Antibody (clone 3F10-4G12) - 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

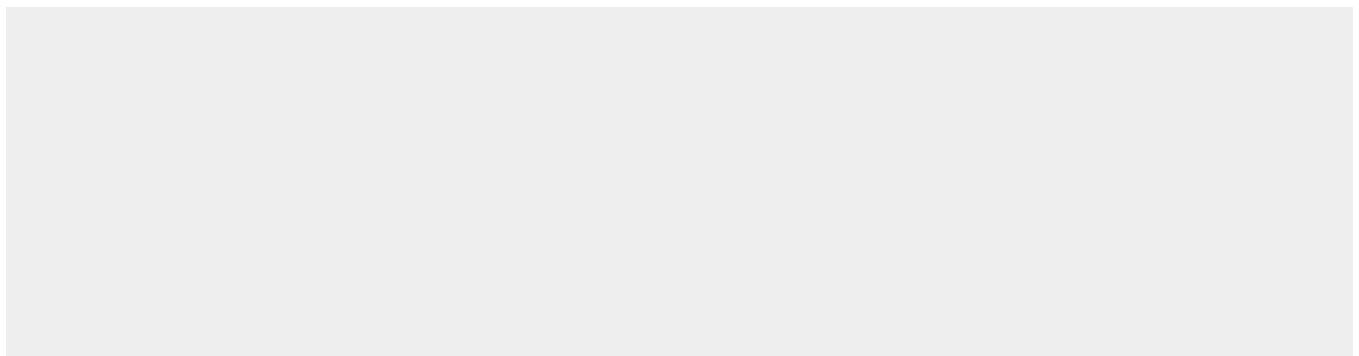
Widely expressed. Expressed in colon, brain, heart, kidney, liver, lung, ovary, pancreas, placenta, prostate, skeletal muscle, small intestine, spleen and testis. Not detected in thymus and peripheral blood leukocytes.

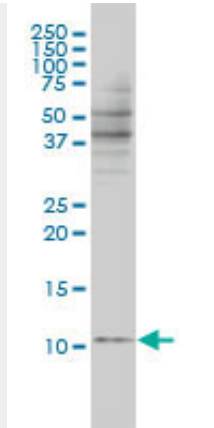
BANF1 / BAF / BCRP1 Antibody (clone 3F10-4G12) - Protocols

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

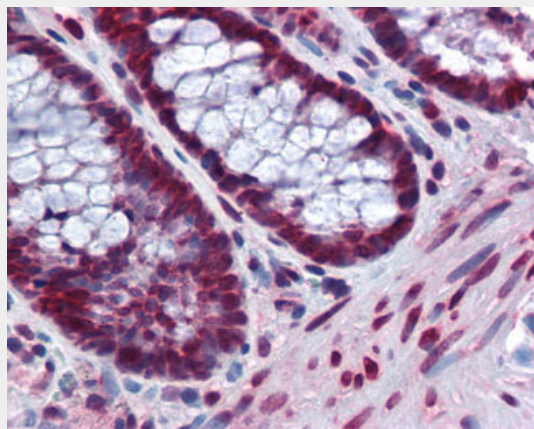
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

BANF1 / BAF / BCRP1 Antibody (clone 3F10-4G12) - Images

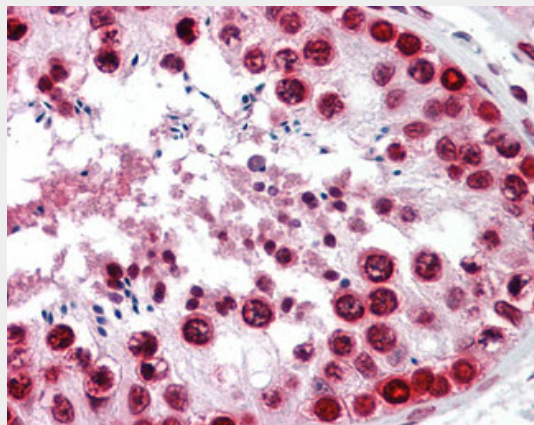




BANF1 monoclonal antibody, clone 3F10-4G12 Western blot of BANF1 expression in Jurkat.



Anti-BANF1 antibody IHC of human colon.



Anti-BANF1 antibody IHC of human testis.

BANF1 / BAF / BCRP1 Antibody (clone 3F10-4G12) - Background

Plays fundamental roles in nuclear assembly, chromatin organization, gene expression and gonad development. May potentially 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 (clone 3F10-4G12) - References

Lee M.S.,et al.Proc. Natl. Acad. Sci. U.S.A. 95:1528-1533(1998).
Lynch R.A.,et al.Genomics 52:17-26(1998).
Zhang J.,et al.Submitted (MAY-1998) to the EMBL/GenBank/DDBJ databases.
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Harris D.,et al.J. Biol. Chem. 275:39671-39677(2000).