

BANF1 Antibody (Center) Blocking peptide
Synthetic peptide
Catalog # BP14071c**Specification**

BANF1 Antibody (Center) Blocking peptide - Product InformationPrimary Accession [O75531](#)**BANF1 Antibody (Center) Blocking peptide - 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

The synthetic peptide sequence used to generate the antibody AP14071c was selected from the Center region of BANF1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

BANF1 Antibody (Center) Blocking peptide - 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).

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 Antibody (Center) Blocking peptide - Protocols

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

- [Blocking Peptides](#)

BANF1 Antibody (Center) Blocking peptide - Images

BANF1 Antibody (Center) Blocking peptide - 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) Blocking peptide - 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)