SANTA CRUZ BIOTECHNOLOGY, INC.

BAF (A-11): sc-166324

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Barrier-to-autointegration factor (BAF) binds non-specifically to double stranded DNA, possibly to play a role in tissue- or cell type-specific gene expression by interacting with different homeodomain transcription factors. BAF compresses chromatin structure and interacts with the LEM domain of nuclear proteins to play a crucial role in membrane recruitment and chromatin decondensation during nuclear assembly. Additionally, retroviruses like HIV-1 incorporate BAF from host cells into preintegration complexes (PICs) to prevent autointegration of retroviral DNA and thereby promote integration of retroviral DNA into the host chromosome.

CHROMOSOMAL LOCATION

Genetic locus: BANF1 (human) mapping to 11q13.1; Banf1 (mouse) mapping to 19 A.

SOURCE

BAF (A-11) is a mouse monoclonal antibody raised against amino acids 1-89 representing full length barrier-to-autointegration factor of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-166324 X, 200 µg/0.1 ml.

BAF (A-11) is available conjugated to agarose (sc-166324 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166324 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166324 PE), fluorescein (sc-166324 FITC), Alexa Fluor® 488 (sc-166324 AF488), Alexa Fluor® 546 (sc-166324 AF546), Alexa Fluor® 594 (sc-166324 AF594) or Alexa Fluor® 647 (sc-166324 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166324 AF680) or Alexa Fluor® 790 (sc-166324 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

BAF (A-11) is recommended for detection of BAF of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). BAF (A-11) is also recommended for detection of BAF in additional species, including equine, canine and bovine.

Suitable for use as control antibody for BAF siRNA (h): sc-43627, BAF siRNA (m): sc-44804, BAF shRNA Plasmid (h): sc-43627-SH, BAF shRNA Plasmid (m): sc-44804-SH, BAF shRNA (h) Lentiviral Particles: sc-43627-V and BAF shRNA (m) Lentiviral Particles: sc-44804-V.

BAF (A-11) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

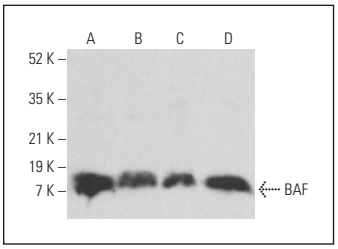
Molecular Weight of BAF: 10 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or Jurkat whole cell lysate: sc-2204.

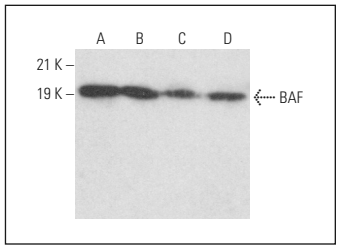
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



BAF (A-11): sc-166324. Western blot analysis of BAF expression in Jurkat (**A**), HeLa (**B**), NTERA-2 cl.D1 (**C**) and K-562 (**D**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



BAF (A-11): sc-166324. Western blot analysis of BAF expression in NIH/3T3 (**A**), PC-12 (**B**), Sol8 (**C**) and SP2/0 (**D**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Qi, R., et al. 2015. The Lamin-A/C-LAP2α-BAF1 protein complex regulates mitotic spindle assembly and positioning. J. Cell Sci. 128: 2830-2841.
2. Lee, B., et al. 2017. Emerin suppresses Notch signaling by restricting the Notch intracellular domain to the nuclear membrane. Biochim. Biophys. Acta 1864: 303-313.
3. Samwer, M., et al. 2017. DNA cross-bridging shapes a single nucleus from a set of mitotic chromosomes. Cell 170: 956-972.e23.
4. Ma, H., et al. 2020. Barrier-to-autointegration factor 1 protects against a basal cGAS-STING response. mBio 11: e00136-20.
5. Young, A.M., et al. 2020. BAF facilitates interphase nuclear membrane repair through recruitment of nuclear transmembrane proteins. Mol. Biol. Cell 31: 1551-1560.
6. Guey, B., et al. 2020. BAF restricts cGAS on nuclear DNA to prevent innate immune activation. Science 369: 823-828.
7. Lee, B., et al. 2021. Emerin represses STAT3 signaling through nuclear membrane-based spatial control. Int. J. Mol. Sci. 22: 6669.
8. Linville, A.C., et al. 2022. Dysregulation of cellular VRK1, BAF, and innate immune signaling by the vaccinia virus B12 pseudokinase. J. Virol. 96: e0039822.
9. Ferrandiz, N., et al. 2022. Endomembranes promote chromosome missegregation by ensheathing misaligned chromosomes. J. Cell Biol. 221: e202203021.
10. Cartwright, T.N., et al. 2022. Dissecting the roles of Haspin and VRK1 in Histone H3 phosphorylation during mitosis. Sci. Rep. 12: 11210.

RESEARCH USE

For research use only, not for use in diagnostic procedures.