SANTA CRUZ BIOTECHNOLOGY, INC.

BACH1 (F-9): sc-271211

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

Members of the small Maf family (MafK, MafF, and MafG) are basic region leucine zipper (bZip) proteins that can function as transcriptional activators or repressors. They dimerize with other proteins and bind DNA to either repress or activate transcription depending on the dimer compositions. BACH1 and BACH2, heterodimerization partners of MafK, are members of a novel family of BTB/POZ-basic region leucine zipper (bzip) factors. BACH1 and BACH2 have significant similarity to each other in BTB domain and Cap "n" collar-type bZip domain but are otherwise divergent. BACH1 appears ubiquitous, whereas BACH2 is restricted to monocytes and neuronal cells and is abundantly expressed in the early stages of B cell differentiation.

CHROMOSOMAL LOCATION

Genetic locus: BACH1 (human) mapping to 21q21.3; Bach1 (mouse) mapping to 16 C3.3.

SOURCE

BACH1 (F-9) is a mouse monoclonal antibody raised against amino acids 591-720 mapping near the C-terminus of BACH1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 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-271211 X, 200 µg/0.1 ml.

BACH1 (F-9) is available conjugated to agarose (sc-271211 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-271211 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271211 PE), fluorescein (sc-271211 FITC), Alexa Fluor® 488 (sc-271211 AF488), Alexa Fluor® 546 (sc-271211 AF546), Alexa Fluor® 594 (sc-271211 AF594) or Alexa Fluor® 647 (sc-271211 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271211 AF680) or Alexa Fluor® 790 (sc-271211 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

BACH1 (F-9) is recommended for detection of BACH1 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).

Suitable for use as control antibody for BACH1 siRNA (h): sc-37064, BACH1 siRNA (m): sc-37065, BACH1 shRNA Plasmid (h): sc-37064-SH, BACH1 shRNA Plasmid (m): sc-37065-SH, BACH1 shRNA (h) Lentiviral Particles: sc-37064-V and BACH1 shRNA (m) Lentiviral Particles: sc-37065-V.

BACH1 (F-9) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

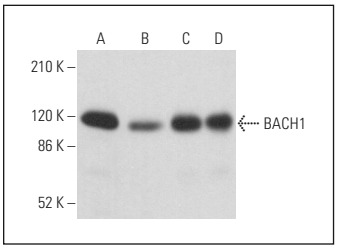
Molecular Weight of BACH1: 92 kDa.

Positive Controls: Raji whole cell lysate: sc-364236, K-562 whole cell lysate: sc-2203 or MCF7 whole cell lysate: sc-2206.

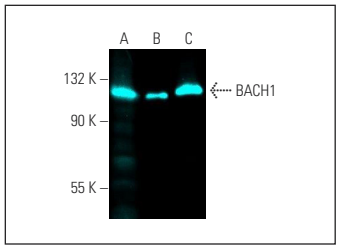
STORAGE

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

DATA



BACH1 (F-9): sc-271211. Western blot analysis of BACH1 expression in K-562 (**A**), Raji (**B**), MCF7 (**C**) and NIH/3T3 (**D**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



BACH1 (F-9) Alexa Fluor® 647: sc-271211 AF647. Direct fluorescent western blot analysis of BACH1 expression in Raji (**A**), HEL 92.1.7 (**B**) and NTERA-2 cl.D1 (**C**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214.

SELECT PRODUCT CITATIONS

1. Tan, M.K., et al. 2013. Parallel SCF adaptor capture proteomics reveals a role for SCF^{FBXL17} in Nrf2 activation via BACH1 repressor turnover. Mol. Cell 52: 9-24.
2. Kazuki, Y., et al. 2014. Down syndrome-associated haematopoiesis abnormalities created by chromosome transfer and genome editing technologies. Sci. Rep. 4: 6136.
3. Botto, S., et al. 2015. Kaposi sarcoma herpesvirus induces HO-1 during *de novo* infection of endothelial cells via viral miRNA-dependent and -independent mechanisms. MBio 6: e00668.
4. Jez, M., et al. 2017. Valproic acid downregulates heme oxygenase-1 independently of Nrf2 by increasing ubiquitination and proteasomal degradation. Biochem. Biophys. Res. Commun. 485: 160-166.
5. Ali, M., et al. 2018. The multiple myeloma risk allele at 5q15 lowers ELL2 expression and increases ribosomal gene expression. Nat. Commun. 9: 1649.
6. Lee, J., et al. 2019. Effective breast cancer combination therapy targeting BACH1 and mitochondrial metabolism. Nature 568: 254-258.
7. Wei, X., et al. 2019. BACH1 regulates self-renewal and impedes mesendodermal differentiation of human embryonic stem cells. Sci. Adv. 5: eaau7887.
8. Rushing, A.W., et al. 2019. HTLV-1 basic leucine zipper factor protects cells from oxidative stress by upregulating expression of Heme Oxygenase I. PLoS Pathog. 15: e1007922.
9. Casares, L., et al. 2020. Cannabidiol induces antioxidant pathways in keratinocytes by targeting BACH1. Redox Biol. 28: 101321.

RESEARCH USE

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