

BACH2 (E-16): sc-14702

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, neuronal cells and is abundantly expressed in the early stages of B-cell differentiation. BACH2, a 841 amino acid polypeptide, is an Nrf2-related transcription repressor and a tissue-specific partner of the Maf oncoprotein family. In culture cells, BACH2 is localized to the cytoplasm through its C-terminal cytoplasmic localization signal (CLS). Oxidative stressors abrogate the CLS activity and induce nuclear accumulation of BACH2, which mediates nucleocytoplasmic communication to couple oxidative stress and transcription repression in mammalian cells. BACH2 heterodimerizes with MAZR through its BTB/POZ domain to activate transcription. BACH2 also plays an important role in the regulation of B cell development.

REFERENCES

- Oyake, T., et al. 1996. BACH proteins belong to a novel family of BTB-basic leucine zipper transcription factors that interact with MafK and regulate transcription through the NF-E2 site. *Mol. Cell. Biol.* 16: 6083-6095.
- Hoshino, H., et al. 2000. Oxidative stress abolishes leptomyacin B-sensitive nuclear export of transcription repressor BACH2 that counteracts activation of Maf recognition element. *J. Biol. Chem.* 275: 15370-15376.

CHROMOSOMAL LOCATION

Genetic locus: BACH2 (human) mapping to 6q15; Bach2 (mouse) mapping to 4 A5.

SOURCE

BACH2 (E-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Bach2 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-14702 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

RESEARCH USE

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

APPLICATIONS

BACH2 (E-16) is recommended for detection of Bach2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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). BACH2 (E-16) is also recommended for detection of Bach2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for BACH2 siRNA (h): sc-37706, BACH2 siRNA (m): sc-37707, BACH2 shRNA Plasmid (h): sc-37706-SH, BACH2 shRNA Plasmid (m): sc-37707-SH, BACH2 shRNA (h) Lentiviral Particles: sc-37706-V and BACH2 shRNA (m) Lentiviral Particles: sc-37707-V.

BACH2 (E-16) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

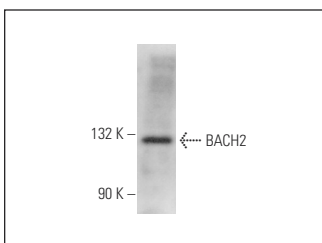
Molecular Weight of BACH2: 110 kDa.

Positive Controls: Neuro-2A whole cell lysate: sc-364185.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



BACH2 (E-16): sc-14702. Western blot analysis of BACH2 expression in Neuro-2A whole cell lysate.

SELECT PRODUCT CITATIONS

- Motamed-Khorasani, A., et al. 2007. Differentially androgen-modulated genes in ovarian epithelial cells from BRCA mutation carriers and control patients predict ovarian cancer survival and disease progression. *Oncogene* 26: 198-214.
- Liu, J., et al. 2009. Identification of novel BACH2 transcripts and protein isoforms through tagging analysis of retroviral integrations in B-cell lymphomas. *BMC Mol. Biol.* 10: 2.