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# BACH1 (m): 293T Lysate: sc-118662

## 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. 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 abort 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.
- Kanezaki, R., et al. 2000. Transcription factor BACH1 is recruited to the nucleus by its novel alternative spliced isoform. *J. Biol. Chem.* 276: 7278-7284.
- Sasaki, S., et al. 2000. Cloning and expression of human B cell-specific transcription factor BACH2 mapped to chromosome 6q15. *Oncogene* 19: 3739-3749.
- Kobayashi, A., et al. 2000. A combinatorial code for gene expression generated by transcription factor BACH2 and MAZR (MAZ-related factor) through the BTB/POZ domain. *Mol. Cell. Biol.* 20: 1733-1746.

## CHROMOSOMAL LOCATION

Genetic locus: Bach1 (mouse) mapping to 16 C3.3.

## PRODUCT

BACH1 (m): 293T Lysate represents a lysate of mouse BACH1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## APPLICATIONS

BACH1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive BACH1 antibodies. Recommended use: 10-20 µl per lane.

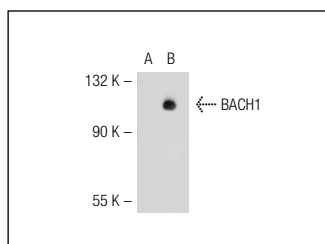
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

BACH1 (L-25): sc-100995 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse BACH1 expression in BACH1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:  
 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

## DATA



BACH1 (L-25): sc-100995. Western blot analysis of BACH1 expression in non-transfected: sc-117752 (A) and mouse BACH1 transfected: sc-118662 (B) 293T whole cell lysates.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.