

Abi-1 (B-12): sc-271180

BACKGROUND

The Abelson oncogene was initially identified as the viral transforming component of Abelson murine leukemia virus (A-MuLV). The Abelson gene (ABL1) encodes a SH2-domain bearing tyrosine kinase which conducts mitogenic signaling pursuant to growth factor receptor ligation. The Abl interactor proteins, Abi-1 and Abi-2, are SH3-domain containing proteins that bind to the proline-rich motifs of Abl and activate the kinase function. Two splice variants of Abi-1 are widely expressed, with the highest levels found in bone marrow, spleen, brain and testis. Abi-1 and Abi-2 are thought to negatively regulate cell growth and transformation, including cellular transformation through v-Abl. ABI1, the gene encoding Abi-1, has been shown to translocate and fuse with MLL (mixed lineage leukemia) gene in some cases of acute myeloid leukemia (AML). The Abi proteins have also been identified as mediators of cell motility by regulating Actin polymerization in lamellipodia and filopodia.

REFERENCES

1. Abelson, H.T., et al. 1970. Lymphosarcoma: virus-induced thymic-independent disease in mice. *Cancer Res.* 30: 2213-2222.
2. Prywes, R., et al. 1983. Sequences of the A-MuLV protein needed for fibroblasts and lymphoid cell transformation. *Cell* 34: 569-579.
3. Overduin, M., et al. 1992. Three-dimensional solution structure of the Src homology 2 domain of c-Abl. *Cell* 70: 697-704.
4. Shi, Y., et al. 1995. Abl interactor-1, a novel SH3 protein binding to the carboxy-terminal portion of the Abl protein, suppresses v-Abl transforming activity. *Genes Dev.* 9: 2583-2597.

CHROMOSOMAL LOCATION

Genetic locus: ABI1 (human) mapping to 10p12.1; Abi1 (mouse) mapping to 2 A3.

SOURCE

Abi-1 (B-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 273-309 within an internal region of Abi-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Abi-1 (B-12) is available conjugated to agarose (sc-271180 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271180 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271180 PE), fluorescein (sc-271180 FITC), Alexa Fluor® 488 (sc-271180 AF488), Alexa Fluor® 546 (sc-271180 AF546), Alexa Fluor® 594 (sc-271180 AF594) or Alexa Fluor® 647 (sc-271180 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271180 AF680) or Alexa Fluor® 790 (sc-271180 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271180 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Abi-1 (B-12) is recommended for detection of Abi-1 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

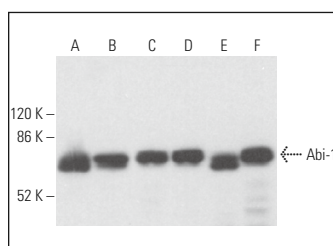
Abi-1 (B-12) is also recommended for detection of Abi-1 in additional species, including canine and porcine.

Suitable for use as control antibody for Abi-1 siRNA (h): sc-40306, Abi-1 siRNA (m): sc-40307, Abi-1 shRNA Plasmid (h): sc-40306-SH, Abi-1 shRNA Plasmid (m): sc-40307-SH, Abi-1 shRNA (h) Lentiviral Particles: sc-40306-V and Abi-1 shRNA (m) Lentiviral Particles: sc-40307-V.

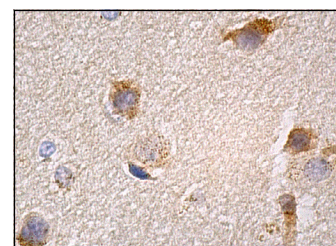
Molecular Weight of Abi-1: 55 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, IMR-32 cell lysate: sc-2409 or Sol8 cell lysate: sc-2249.

DATA



Abi-1 (B-12): sc-271180. Western blot analysis of Abi-1 expression in HeLa (A), IMR-32 (B), Sol8 (C), BC₃H1 (D), MM-142 (E) and A-10 (F) whole cell lysates.



Abi-1 (B-12): sc-271180. Immunoperoxidase staining of formalin fixed, paraffin-embedded human brain tissue showing cytoplasmic staining of neuronal cells.

SELECT PRODUCT CITATIONS

1. Kummer, D., et al. 2022. A JAM-A-tetraspanin- α v β 5 Integrin complex regulates contact inhibition of locomotion. *J. Cell Biol.* 221: e202105147.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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