SANTA CRUZ BIOTECHNOLOGY, INC.

AHI1 (B-2): sc-515382

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

AHI1 (abelson helper integration site 1), also known as ORF1, AHI-1, JBTS3 or Jouberin, is a 1,196 amino acid signaling protein that is expressed in the brain, specifically in neurons that give rise to the crossing axons of the corticospinal tract and superior cerebellar peduncles. AHI1 contains seven WD repeats, an SH3 domain, and several SH3-binding sites and is critical for both cerebellar and cortical development. Mutations of AHI1 is associated with Joubert syndrome (JS), an autosomal recessive disorder characterized by hypotonia, ataxia, mental retardation, altered respiratory pattern, abnormal eye movements, and a brain malformation. Considered a novel oncogene, AHI1 is highly deregulated in chronic myeloid leukemia (CML). Three isoforms exist due to alternative splicing events.

CHROMOSOMAL LOCATION

Genetic locus: AHI1 (human) mapping to 6q23.3; Ahi1 (mouse) mapping to 10 A3.

SOURCE

AHI1 (B-2) is a mouse monoclonal antibody raised against amino acids 601-897 mapping within an internal region of AHI1 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.

AHI1 (B-2) is available conjugated to agarose (sc-515382 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515382 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515382 PE), fluorescein (sc-515382 FITC), Alexa Fluor® 488 (sc-515382 AF488), Alexa Fluor® 546 (sc-515382 AF546), Alexa Fluor® 594 (sc-515382 AF594) or Alexa Fluor® 647 (sc-515382 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515382 AF680) or Alexa Fluor® 790 (sc-515382 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

AHI1 (B-2) is recommended for detection of AHI1 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 AHI1 siRNA (h): sc-72465, AHI1 siRNA (m): sc-72466, AHI1 shRNA Plasmid (h): sc-72465-SH, AHI1 shRNA Plasmid (m): sc-72466-SH, AHI1 shRNA (h) Lentiviral Particles: sc-72465-V and AHI1 shRNA (m) Lentiviral Particles: sc-72466-V.

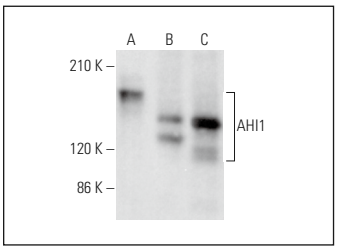
Molecular Weight of AHI1: 136 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, F9 cell lysate: sc-2245 or PC-12 cell lysate: sc-2250.

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



AHI1 (B-2): sc-515382. Western blot analysis of AHI1 expression in HeLa (**A**), F9 (**B**) and PC-12 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Wang, B., et al. 2022. AHI1 regulates serotonin production by the GR/ERβ/TPH2 pathway involving sexual differences in depressive behaviors. Cell Commun. Signal. 20: 74.
2. Zhang, H.G., et al. 2022. Depression compromises antiviral innate immunity via the AVP-AHI1-Tyk2 axis. Cell Res. 32: 897-913.
3. Wang, B., et al. 2023. The mitochondrial Ahi1/GR participates the regulation on mtDNA copy numbers and brain ATP levels and modulates depressive behaviors in mice. Cell Commun. Signal. 21: 21.
4. Miao, Y., et al. 2023. Cycloheximide (CHX) chase assay to examine protein half-life. Bio Protoc. 13: e4690.
5. Wei, B., et al. 2024. GR/Ahi1 regulates WDR68-DYRK1A binding and mediates cognitive impairment in prenatally stressed offspring. Cell. Mol. Life Sci. 81: 20.

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.