SANTA CRUZ BIOTECHNOLOGY, INC.

BRUNOL4 (C-4): sc-398292

BACKGROUND

Members of the CELF (CUG-BP1- and ETR-3-like factor) family are RNA-binding proteins implicated in the regulation of pre-mRNA alternative splicing. The CELF family includes six members. CELF4, also designated BRUNOL4, mediates exon inclusion and/or exclusion in pre-mRNAs that are subject to tissue-specific and developmentally regulated alternative splicing. Specifically, BRUNOL4 activates exon 5 inclusion of cardiac isoforms of Troponin T-C during heart remodeling at the juvenile to adult transition, and promotes exclusion of both the smooth muscle (SM) and non-muscle (NM) exons in actinin pre-mRNAs. BRUNOL4 contains 3 RRM (RNA recognition motif) domains and binds to muscle-specific splicing enhancer (MSE) intronic sites flanking the alternative exon 5 of Troponin T-C pre-mRNA. BRUNOL4 is strongly expressed in cerebellum, hippocampus, amygdala, temporal and frontal cortex and frontal lobes. Disruption of the gene encoding BRUNOL4 results in idiopathic epilepsy, a common human disorder that leads to severe seizures.

REFERENCES

1. Ladd, A.N., et al. 2001. The CELF family of RNA binding proteins is implicated in cell-specific and developmentally regulated alternative splicing. Mol. Cell. Biol. 21: 1285-1296.
2. Meins, M., et al. 2002. Identification and characterization of murine BRUNOL4, a new member of the elav/bruno family. Cytogenet. Genome Res. 97: 254-260.
3. Gromak, N., et al. 2003. Antagonistic regulation of α-actinin alternative splicing by CELF proteins and polypyrimidine tract binding protein. RNA 9: 443-456.

CHROMOSOMAL LOCATION

Genetic locus: CELF4 (human) mapping to 18q12.2; Celf4 (mouse) mapping to 18 A2.

SOURCE

BRUNOL4 (C-4) is a mouse monoclonal antibody raised against amino acids 1-50 mapping at the N-terminus of BRUNOL4 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.

BRUNOL4 (C-4) is available conjugated to agarose (sc-398292 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398292 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398292 PE), fluorescein (sc-398292 FITC), Alexa Fluor® 488 (sc-398292 AF488), Alexa Fluor® 546 (sc-398292 AF546), Alexa Fluor® 594 (sc-398292 AF594) or Alexa Fluor® 647 (sc-398292 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398292 AF680) or Alexa Fluor® 790 (sc-398292 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

BRUNOL4 (C-4) is recommended for detection of BRUNOL4 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).

BRUNOL4 (C-4) is also recommended for detection of BRUNOL4 in additional species, including equine.

Suitable for use as control antibody for BRUNOL4 siRNA (h): sc-72666, BRUNOL4 siRNA (m): sc-141756, BRUNOL4 shRNA Plasmid (h): sc-72666-SH, BRUNOL4 shRNA Plasmid (m): sc-141756-SH, BRUNOL4 shRNA (h) Lentiviral Particles: sc-72666-V and BRUNOL4 shRNA (m) Lentiviral Particles: sc-141756-V.

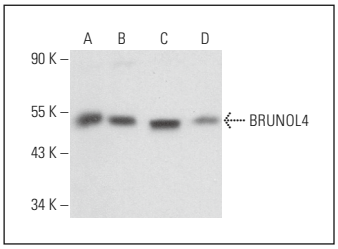
Molecular Weight of BRUNOL4: 52 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812, HeLa whole cell lysate: sc-2200 or WI-38 whole cell lysate: sc-364260.

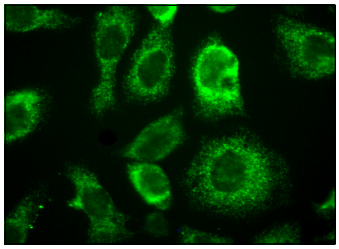
RECOMMENDED SUPPORT REAGENTS

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



BRUNOL4 (C-4): sc-398292. Western blot analysis of BRUNOL4 expression in SH-SY5Y (**A**), HeLa (**B**), HCT-116 (**C**) and WI-38 (**D**) whole cell lysates.



BRUNOL4 (C-4): sc-398292. Immunofluorescence staining of formalin-fixed A-431 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Li, J., et al. 2018. An alternative splicing switch in FLNB promotes the mesenchymal cell state in human breast cancer. Elife 7: e37184.

STORAGE

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