SANTA CRUZ BIOTECHNOLOGY, INC.

eIF2C (B-3): sc-376696

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Eukaryotic translation initiation factor 2C (eIF2C) proteins (argonaute family) influence RNA interference (RNAi) as components of the RNA-inducible silencing complex (RISC) or microRNA (miRNA)-containing ribonucleoprotein particle (miRNP). Small RNAs, including small interfering RNAs (siRNAs) and miRNAs, can silence target genes through mechanisms that utilize RISC or miRNP particles. eIF2C1 (argonaute 1, AGO1, eIF2C, GERP95, Q99) and Dicer1 play a coordinated role in siRNA-mediated gene silencing. eIF2C2 (slicer, argonaute 2, AGO2, Q10) is a RISC component that can concentrate in cytoplasmic processing bodies (P-bodies) and catalyze mRNA cleavage. Mammalian P-bodies contain mRNAs and have an association with miRNA-induced translational silencing and siRNA-induced mRNA degradation. Additional eIF2C proteins include eIF2C3 (argonaute 3, AGO3), eIF2C4 (argonaute 4, AGO4) and meIF2c5 (mouse argonaute 5).

SOURCE

eIF2C (B-3) is a mouse monoclonal antibody raised against amino acids 552-851 mapping at the C-terminus of eIF2C2 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.

eIF2C (B-3) is available conjugated to agarose (sc-376696 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376696 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376696 PE), fluorescein (sc-376696 FITC), Alexa Fluor® 488 (sc-376696 AF488), Alexa Fluor® 546 (sc-376696 AF546), Alexa Fluor® 594 (sc-376696 AF594) or Alexa Fluor® 647 (sc-376696 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376696 AF680) or Alexa Fluor® 790 (sc-376696 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

eIF2C (B-3) is recommended for detection of eIF2C1-4 (also designated Argonaute1-4) 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).

eIF2C (B-3) is also recommended for detection of eIF2C1-4 (also designated argonaute1-4) in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of eIF2C: 94 kDa.

Positive Controls: C6 whole cell lysate: sc-364373, Neuro-2A whole cell lysate: sc-364185 or PC-12 cell lysate: sc-2250.

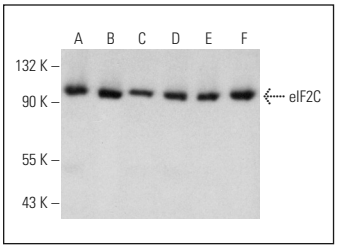
STORAGE

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

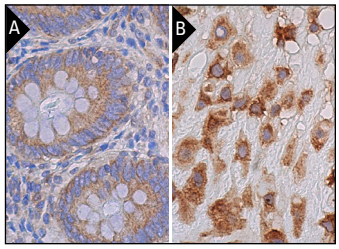
RESEARCH USE

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

DATA



eIF2C (B-3): sc-376696. Western blot analysis of eIF2C expression in C6 (**A**), Neuro-2A (**B**), L8 (**C**), PMJ2-C (**D**), RAW 264.7 (**E**) and PC-12 (**F**) whole cell lysates.



eIF2C (B-3): sc-376696. Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing cytoplasmic staining of glandular cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of decidual cells (**B**).

SELECT PRODUCT CITATIONS

1. Silva, A.M., et al. 2018. Profiling the circulating miRnome reveals a temporal regulation of the bone injury response. Theranostics 8: 3902-3917.
2. Ryu, H.G., et al. 2019. Upf1 regulates neurite outgrowth and branching by transcriptional and post-transcriptional modulation of Arc. J. Cell Sci. 132: jcs224055.
3. Nair-Menon, J., et al. 2020. Predominant distribution of the RNAi machinery at apical adherens junctions in colonic epithelia is disrupted in cancer. Int. J. Mol. Sci. 21: 2559.
4. Bah, I., et al. 2020. HuR promotes miRNA-mediated upregulation of NFI-A protein expression in MDSCs during murine sepsis. Mol. Immunol. 123: 97-105.
5. De Luca, T., et al. 2021. Novel quantification of extracellular vesicles with unaltered surface membranes using an internalized oligonucleotide tracer and applied pharmacokinetic multiple compartment modeling. Pharm. Res. 38: 1677-1695.
6. Qian, B., et al. 2021. m^6A modification promotes miR-133a repression during cardiac development and hypertrophy via IGF2BP2. Cell Death Discov. 7: 157.
7. Fong, M.Y., et al. 2021. Cancer-secreted miRNAs regulate amino-acid-induced mTORC1 signaling and fibroblast protein synthesis. EMBO Rep. 22: e51239.
8. Chen, D., et al. 2021. The circRAB3IP mediated by eIF4A3 and LEF1 contributes to enzalutamide resistance in prostate cancer by targeting miR-133a-3p/miR-133b/SGK1 pathway. Front. Oncol. 11: 752573.

PROTOCOLS

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