SANTA CRUZ BIOTECHNOLOGY, INC.

eIF2C4 (E-7): sc-374220

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).

CHROMOSOMAL LOCATION

Genetic locus: AGO4 (human) mapping to 1p34.3; Ago4 (mouse) mapping to 4 D2.2.

SOURCE

eIF2C4 (E-7) is a mouse monoclonal antibody raised against amino acids 621-861 mapping at the C-terminus of eIF2C4 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.

eIF2C4 (E-7) is available conjugated to agarose (sc-374220 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-374220 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374220 PE), fluorescein (sc-374220 FITC), Alexa Fluor® 488 (sc-374220 AF488), Alexa Fluor® 546 (sc-374220 AF546), Alexa Fluor® 594 (sc-374220 AF594) or Alexa Fluor® 647 (sc-374220 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374220 AF680) or Alexa Fluor® 790 (sc-374220 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

eIF2C4 (E-7) is recommended for detection of eIF2C4 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). eIF2C4 (E-7) is also recommended for detection of eIF2C4 in additional species, including canine, bovine, porcine and avian.

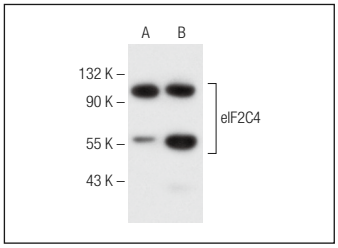
Suitable for use as control antibody for eIF2C4 siRNA (h): sc-44411, eIF2C4 siRNA (m): sc-44668, eIF2C4 shRNA Plasmid (h): sc-44411-SH, eIF2C4 shRNA Plasmid (m): sc-44668-SH, eIF2C4 shRNA (h) Lentiviral Particles: sc-44411-V and eIF2C4 shRNA (m) Lentiviral Particles: sc-44668-V.

Positive Controls: HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

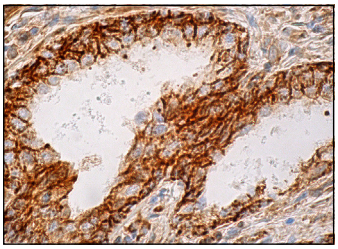
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



eIF2C4 (E-7): sc-374220. Western blot analysis of eIF2C4 expression in HeLa (**A**) and Jurkat (**B**) whole cell lysates.



eIF2C4 (E-7): sc-374220. Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing cytoplasmic and membrane staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Chu, Y.Y., et al. 2017. Bortezomib-induced miRNAs direct epigenetic silencing of locus genes and trigger apoptosis in leukemia. Cell Death Dis. 8: e3167.
2. Wang, L., et al. 2023. AGO4 suppresses tumor growth by modulating autophagy and apoptosis via enhancing TRIM21-mediated ubiquitination of GRP78 in a p53-independent manner. Oncogene 42: 62-77.

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.