

eIF2C (H-300): sc-32877

---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).

REFERENCES

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- Carmell, M.A., et al. 2002. The argonaute family: tentacles that reach into RNAi, developmental control, stem cell maintenance and tumorigenesis. *Genes Dev.* 16: 2733-2742.
- Yan, K.S., et al. 2003. Structure and conserved RNA binding of the PAZ domain. *Nature* 426: 468-474.
- Meister, G., et al. 2004. Human argonaute2 mediates RNA cleavage targeted by miRNAs and siRNAs. *Mol. Cell.* 15: 185-197.
- Sontheimer, E.J., et al. 2004. Molecular biology. Argonaute journeys into the heart of RISC. *Science* 305: 1409-1410.
- Liu, J., et al. 2004. Argonaute2 is the catalytic engine of mammalian RNAi. *Science* 305: 1437-1441.
- Sen, G.L., et al. 2005. Argonaute 2/RISC resides in sites of mammalian mRNA decay known as cytoplasmic bodies. *Nat. Cell. Biol.* 7: 633-636.

CHROMOSOMAL LOCATION

Genetic locus: EIF2C1/EIF2C3/EIF2C4 (human) mapping to 1p34.3, EIF2C2 (human) mapping to 8q24.3; Eif2c1/Eif2c3/Eif2c4 (mouse) mapping to 4 D2.2, Eif2c2 (mouse) mapping to 15 D3.

SOURCE

eIF2C (H-300) is a rabbit polyclonal antibody raised against amino acids 552-851 mapping at the C-terminus of eIF2C2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

eIF2C (H-300) is recommended for detection of eIF2C1-4 (also designated Argonaute1-4) of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

eIF2C (H-300) 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.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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


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Try **eIF2C (B-3): sc-376696**, our highly recommended monoclonal alternative to eIF2C (H-300). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **eIF2C (B-3): sc-376696**.