

eIF2C3 (C-13): sc-32662

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 melf2c5 (mouse argonaute 5).

REFERENCES

- Martinez, J., et al. 2002. Single-stranded antisense siRNAs guide target RNA cleavage in RNAi. *Cell* 110: 563-574.
- 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.
- Liu, J., et al. 2005. MicroRNA-dependent localization of targeted mRNAs to mammalian P-bodies. *Nat. Cell Biol.* 7: 719-723.

CHROMOSOMAL LOCATION

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

SOURCE

eIF2C3 (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of eIF2C3 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.

Blocking peptide available for competition studies, sc-32662 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

eIF2C3 (C-13) is recommended for detection of eIF2C3 and, to a lesser extent, eIF2C4 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).

eIF2C3 (C-13) is also recommended for detection of eIF2C3 and, to a lesser extent, eIF2C4 in additional species, including equine, canine, bovine, porcine and avian.

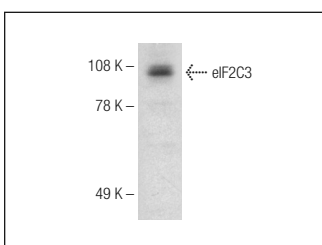
Molecular Weight of eIF2C3: 97 kDa.

Positive Controls: F9 cell lysate: sc-2245.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



eIF2C3 (C-13): sc-32662. Western blot analysis of eIF2C3 expression in F9 whole cell lysate.

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.



Try **eIF2C (B-3): sc-376696**, our highly recommended monoclonal alternative to eIF2C3 (C-13). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **eIF2C (B-3): sc-376696**.