

SECp43 (T-12): sc-163349

BACKGROUND

SECp43, also known as tRNA (Sec) selenocysteine 1-associated protein 1 or TRNAU1AP, is a 287 amino acid member of the RRM TRSPAP protein family. Localized to the nucleus and cytoplasm, yet found more abundantly in the nucleus, SECp43 contains two RRM (RNA recognition motif) domains. The RRM domain contains two highly conserved regions: a six amino acid, hydrophobic motif (RNP-2) and an octapeptide motif (RNP-1). SECp43 is involved in the early stages of selenocysteine biosynthesis and tRNA charging. It is also involved in the later stages of the cotranslational incorporation of selenocysteine into selenoproteins. Possibly involved in the methylation of tRNA, SECp43 associates with mRNP, SELB, SBP-2 and tRNA. Two isoforms of SECp43 exist as a result of alternative splicing events.

REFERENCES

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2. Ding, F., et al. 1999. Identification of a protein component of a mammalian tRNA(Sec) complex implicated in the decoding of UGA as selenocysteine. *RNA* 5: 1561-1569.
3. Krol, A. 2002. Evolutionarily different RNA motifs and RNA-protein complexes to achieve selenoprotein synthesis. *Biochimie* 84: 765-774.
4. Lescure, A., et al. 2002. Protein factors mediating selenoprotein synthesis. *Curr. Protein Pept. Sci.* 3: 143-151.
5. Xu, X.M., et al. 2005. Evidence for direct roles of two additional factors, SECp43 and soluble liver antigen, in the selenoprotein synthesis machinery. *J. Biol. Chem.* 280: 41568-41575.
6. Small-Howard, A., et al. 2006. Supramolecular complexes mediate selenocysteine incorporation *in vivo*. *Mol. Cell. Biol.* 26: 2337-2346.
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CHROMOSOMAL LOCATION

Genetic locus: TRNAU1AP (human) mapping to 1p35.3; Trnau1ap (mouse) mapping to 4 D2.3.

SOURCE

SECp43 (T-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SECp43 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-163349 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

SECp43 (T-12) is recommended for detection of SECp43 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

SECp43 (T-12) is also recommended for detection of SECp43 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for SECp43 siRNA (h): sc-88771, SECp43 siRNA (m): sc-153319, SECp43 shRNA Plasmid (h): sc-88771-SH, SECp43 shRNA Plasmid (m): sc-153319-SH, SECp43 shRNA (h) Lentiviral Particles: sc-88771-V and SECp43 shRNA (m) Lentiviral Particles: sc-153319-V.

Molecular Weight (predicted) of SECp43: 32 kDa.

Molecular Weight (observed) of SECp43: 36 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

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) 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.

STORAGE

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

PROTOCOLS

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