

SECp43 (E-7): sc-377448

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

- Low, S.C., et al. 1996. Knowing when not to stop: selenocysteine incorporation in eukaryotes. *Trends Biochem. Sci.* 21: 203-208.
- 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.
- Krol, A. 2002. Evolutionarily different RNA motifs and RNA-protein complexes to achieve selenoprotein synthesis. *Biochimie* 84: 765-774.
- Lescure, A., et al. 2002. Protein factors mediating selenoprotein synthesis. *Curr. Protein Pept. Sci.* 3: 143-151.
- 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.

CHROMOSOMAL LOCATION

Genetic locus: TRNAU1AP (human) mapping to 1p35.3; Trna1ap (mouse) mapping to 4 D2.3.

SOURCE

SECp43 (E-7) is a mouse monoclonal antibody raised against amino acids 141-260 mapping near the C-terminus of SECp43 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-377448 X, 200 µg/0.1 ml.

SECp43 (E-7) is available conjugated to agarose (sc-377448 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377448 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377448 PE), fluorescein (sc-377448 FITC), Alexa Fluor® 488 (sc-377448 AF488), Alexa Fluor® 546 (sc-377448 AF546), Alexa Fluor® 594 (sc-377448 AF594) or Alexa Fluor® 647 (sc-377448 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377448 AF680) or Alexa Fluor® 790 (sc-377448 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

SECp43 (E-7) is recommended for detection of SECp43 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).

SECp43 (E-7) is also recommended for detection of SECp43 in additional species, including equine, canine, bovine and porcine.

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.

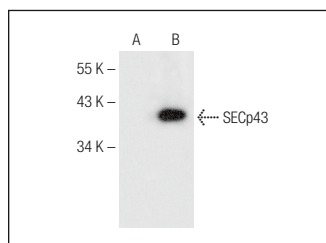
SECp43 (E-7) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of SECp43: 32 kDa.

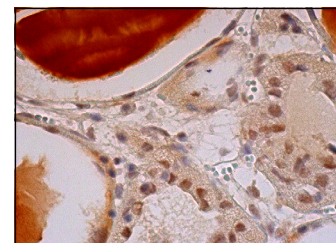
Molecular Weight (observed) of SECp43: 36 kDa.

Positive Controls: SECp43 (m): 293T Lysate: sc-125974 or Jurkat whole cell lysate: sc-2204.

DATA



SECp43 (E-7): sc-377448. Western blot analysis of SECp43 expression in non-transfected: sc-117752 (A) and mouse SECp43 transfected: sc-125974 (B) 293T whole cell lysates.



SECp43 (E-7): sc-377448. Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid gland tissue showing nuclear and cytoplasmic staining of glandular cells.

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.