

SCOT-t (E-14): sc-163335

BACKGROUND

SCOT-t (succinyl-CoA:3-ketoacid-coenzyme A transferase 2, mitochondrial), also known as OXCT2 (3-oxoacid CoA transferase 2), is a 517 amino acid protein that belongs to the 3-oxoacid CoA-transferase family. SCOT-t is a testis-specific succinyl-CoA:3-oxoacid CoA transferase, which catalyzes the reversible transfer of CoA from succinyl-CoA to acetoacetate in the first step of ketone body utilization. As a key enzyme for ketone body catabolism, SCOT-t transfers the CoA moiety from succinate to acetoacetate. Formation of the enzyme-CoA intermediate proceeds via an unstable anhydride species formed between the carboxylate groups of the enzyme and substrate. The SCOT-t protein has been detected in testis and spermatozoa, where it localized specifically to the midpiece of sperm flagellum. The human SCOT-t protein shares 75.8% and 74.6% amino acid identity with mouse SCOT-t and human SCOT, respectively. The SCOT-t gene lacks an intron, and a nearby nonfunctional pseudogene has been identified in which nucleotides 745-762 and 778 are deleted. The entire SCOT-t transcription unit is located within an intron of the BMP-8 gene. The SCOT-t gene maps to human chromosome 1p34.2.

REFERENCES

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- Cheung, J., et al. 2003. Recent segmental and gene duplications in the mouse genome. *Genome Biol.* 4: R47.
- Onishi, M., et al. 2004. Gene structure and evolution of testicular haploid germ cell-specific genes, *Oxct2a* and *Oxct2b*. *Genomics* 83: 647-657.
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CHROMOSOMAL LOCATION

Genetic locus: OXCT2 (human) mapping to 1p34.2; *Oxct2a*/*Oxct2b* (mouse) mapping to 4 D2.2.

SOURCE

SCOT-t (E-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SCOT-t of human origin.

STORAGE

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

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-163335 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SCOT-t (E-14) is recommended for detection of SCOT-t of mouse 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).

SCOT-t (E-14) is also recommended for detection of SCOT-t in additional species, including bovine.

Suitable for use as control antibody for SCOT-t siRNA (h): sc-88311, SCOT-t siRNA (m): sc-153267, SCOT-t shRNA Plasmid (h): sc-88311-SH, SCOT-t shRNA Plasmid (m): sc-153267-SH, SCOT-t shRNA (h) Lentiviral Particles: sc-88311-V and SCOT-t shRNA (m) Lentiviral Particles: sc-153267-V.

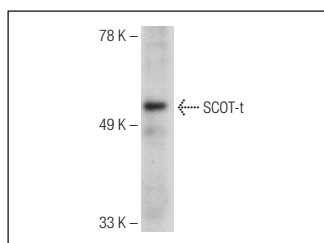
Molecular Weight of SCOT-t: 56 kDa.

Positive Controls: Mouse testis extract: sc-2405.

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



SCOT-t (E-14): sc-163335. Western blot analysis of SCOT-t expression in mouse testis tissue extract.

RESEARCH USE

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