

# MCTS1 (E-14): sc-168563

## BACKGROUND

MCTS1 (malignant T cell amplified sequence 1), also known as MCT1, is a 181 amino acid protein that is ubiquitously expressed and localizes to the cytoplasm of cells. MCTS1 may play a role in cell cycle regulation by decreasing cell doubling time and by shortening the duration of G<sub>1</sub> transit time and G<sub>1</sub>/S transition. The protein level of Cdk4 and Cdk6 kinases activity and cyclin D1 is enhanced by expression of MCTS1. As a translation enhancer, MCTS1 recruits DENR and binds to the cap complex of the 5'-terminus of mRNAs, subsequently altering the mRNA translation profile. MCTS1 promotes lymphoid tumor development and contributes to the pathogenesis and progression of breast cancer. MCTS1 positively regulates phosphorylation of ERK1 and ERK2.

## REFERENCES

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3. Herbert, G.B., et al. 2001. Expression and stabilization of the MCT-1 protein by DNA damaging agents. *Oncogene* 20: 6777-6783.
4. Shi, B., et al. 2003. Identification and characterization of a novel enhancer for the human MCT-1 oncogene promoter. *J. Cell. Biochem.* 90: 68-79.
5. Levenson, A.S., et al. 2005. MCT-1 oncogene contributes to increased *in vivo* tumorigenicity of MCF7 cells by promotion of angiogenesis and inhibition of apoptosis. *Cancer Res.* 65: 10651-10656.
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7. Mazan-Mamczarz, K., et al. 2007. Post-transcriptional control of the MCT-1-associated protein DENR/DRP by RNA-binding protein AUF1. *Cancer Genomics Proteomics* 4: 233-239.
8. Hsu, H.L., et al. 2007. MCT-1 oncogene downregulates p53 and destabilizes genome structure in the response to DNA double-strand damage. *DNA Repair* 6: 1319-1332.
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## CHROMOSOMAL LOCATION

Genetic locus: Mcts1 (mouse) mapping to X A3.3, Mcts2 (mouse) mapping to 2 H1.

## SOURCE

MCTS1 (E-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MCTS1 of human origin.

## RESEARCH USE

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

## 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-168563 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

MCTS1 (E-14) is recommended for detection of MCTS1 and MCTS2 of mouse 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).

MCTS1 (E-14) is also recommended for detection of MCTS1 and MCTS2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for MCTS1 siRNA (m): sc-149331, MCTS1 shRNA Plasmid (m): sc-149331-SH and MCTS1 shRNA (m) Lentiviral Particles: sc-149331-V.

Molecular Weight of MCTS1: 20 kDa.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.