SANTA CRUZ BIOTECHNOLOGY, INC.

DTYMK (E-14): sc-167685

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The Power to Question

BACKGROUND

DTYMK (deoxythymidylate kinase (thymidylate kinase)), also known as CDC8, TMPK, TYMK or dTMP kinase, is a 212 amino acid protein that belongs to the thymidylate kinase family and is involved in pyrimidine metabolism. Specifically, DTYMK catalyzes the ATP-dependent conversion of dTMP (deoxythymidine monophosphate) to dTDP (deoxythymidine diphosphate), which then functions as one of the four nucleotides in DNA. Via its role in the catalytic creation of dTDP, DTYMK plays an important role in the pathway of DNA synthesis and is thought to be involved in cell cycle progression and cell growth. DTYMK expression levels peak during the S phase (synthesis phase) of the cell cycle, further supporting the role of DTYMK in DNA synthesis.

REFERENCES

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2. Su, J.Y. and Sclafani, R.A. 1991. Molecular cloning and expression of the human deoxythymidylate kinase gene in yeast. Nucleic Acids Res. 19: 823-827.
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4. Van Rompay, A.R., Johansson, M. and Karlsson, A. 2000. Phosphorylation of nucleosides and nucleoside analogs by mammalian nucleoside monophosphate kinases. Pharmacol. Ther. 87: 189-198.
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CHROMOSOMAL LOCATION

Genetic locus: DTYMK (human) mapping to 2q37.3; Dtymk (mouse) mapping to 1 D.

SOURCE

DTYMK (E-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of DTYMK 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-167685 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DTYMK (E-14) is recommended for detection of DTYMK 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).

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

Suitable for use as control antibody for DTYMK siRNA (h): sc-94639, DTYMK siRNA (m): sc-143184, DTYMK shRNA Plasmid (h): sc-94639-SH, DTYMK shRNA Plasmid (m): sc-143184-SH, DTYMK shRNA (h) Lentiviral Particles: sc-94639-V and DTYMK shRNA (m) Lentiviral Particles: sc-143184-V.

Molecular Weight of DTYMK: 24 kDa.

Positive Controls: Mouse colon tissue extract: sc-364238.

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.

RESEARCH USE

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

PROTOCOLS

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