

Ethanolamine kinase 2 (W-12): sc-162780

BACKGROUND

Ethanolamine kinase 2, also known as EK12, ETNK2 or HMFT1716, is a 386 amino acid protein that belongs to the choline/ethanolamine kinase family. Via the cytidine diphosphate (CDP) ethanolamine pathway, Ethanolamine kinase 2 catalyses the initial step of phosphatidylethanolamine (PtdEtn) biosynthesis. Ethanolamine kinase 2 is expressed in kidney, liver, testis, ovary and prostate, and is highly specific for ethanolamine phosphorylation. Upregulated during testis development, Ethanolamine kinase 2 may play an essential role in regulating placental hemostasis. Existing as three alternatively spliced isoforms, the gene encoding Ethanolamine kinase 2 maps to human and mouse chromosome 1. Human chromosome 1 spans 260 million base pairs, contains over 3,000 genes, comprises nearly 8% of the human genome and houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome.

REFERENCES

1. Eudy, J.D., et al. 1998. Mutation of a gene encoding a protein with extracellular matrix motifs in Usher syndrome type IIa. *Science* 280: 1753-1757.
2. Bowling, E.L., et al. 2000. The Stickler syndrome: case reports and literature review. *Optometry* 71: 177-182.
3. Lykidis, A., et al. 2001. Overexpression of a mammalian ethanolamine-specific kinase accelerates the CDP-ethanolamine pathway. *J. Biol. Chem.* 276: 2174-2179.

CHROMOSOMAL LOCATION

Genetic locus: ETNK2 (human) mapping to 1q32.1; Etnk2 (mouse) mapping to 1 E4.

SOURCE

Ethanolamine kinase 2 (W-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Ethanolamine kinase 2 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-162780 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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 or our catalog for detailed protocols and support products.

APPLICATIONS

Ethanolamine kinase 2 (W-12) is recommended for detection of Ethanolamine kinase 2 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).

Ethanolamine kinase 2 (W-12) is also recommended for detection of Ethanolamine kinase 2 in additional species, including canine and porcine.

Suitable for use as control antibody for Ethanolamine kinase 2 siRNA (h): sc-78755, Ethanolamine kinase 2 siRNA (m): sc-144956, Ethanolamine kinase 2 shRNA Plasmid (h): sc-78755-SH, Ethanolamine kinase 2 shRNA Plasmid (m): sc-144956-SH, Ethanolamine kinase 2 shRNA (h) Lentiviral Particles: sc-78755-V and Ethanolamine kinase 2 shRNA (m) Lentiviral Particles: sc-144956-V.

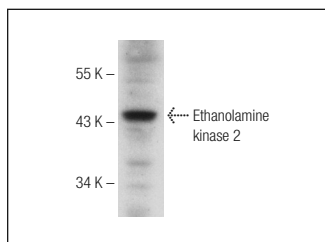
Molecular Weight of Ethanolamine kinase 2: 45 kDa.

Positive Controls: SK-BR-3 cell lysate: sc-2218.

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



Ethanolamine kinase 2 (W-12): sc-162780. Western blot analysis of Ethanolamine kinase 2 expression in SK-BR-3 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Esmaili, M., et al. 2013. Quantitative 31 P HR-MAS MR spectroscopy for detection of response to PI3K/mTOR inhibition in breast cancer xenografts. *Magn. Reson. Med.* E-Published.