

Ethanolamine kinase 2 (P-12): sc-162778

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.
4. Hurley, T.M., et al. 2004. Eki2 is upregulated specifically in the testis during mouse sex determination. *Gene Expr. Patterns* 4: 135-140.
5. Yamada, S., et al. 2004. Expression profiling and differential screening between hepatoblastomas and the corresponding normal livers: identification of high expression of the PLK1 oncogene as a poor-prognostic indicator of hepatoblastomas. *Oncogene* 23: 5901-5911.
6. Tian, Y., et al. 2006. Placental thrombosis and spontaneous fetal death in mice deficient in ethanolamine kinase 2. *J. Biol. Chem.* 281: 28438-28449.
7. Gregory, S.G., et al. 2006. The DNA sequence and biological annotation of human chromosome 1. *Nature* 441: 315-321.

CHROMOSOMAL LOCATION

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

SOURCE

Ethanolamine kinase 2 (P-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-162778 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

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

Ethanolamine kinase 2 (P-12) is also recommended for detection of Ethanolamine kinase 2 in additional species, including 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.

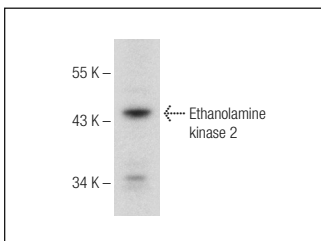
Molecular Weight of Ethanolamine kinase 2: 45 kDa.

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) 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 (P-12): sc-162778. Western blot analysis of Ethanolamine kinase 2 expression in SK-BR-3 whole cell lysate.

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.