

Ethanolamine kinase (U-23): sc-130754

BACKGROUND

Ethanolamine kinase (ETNK1) is a 452 amino acid member of the choline/ethanolamine kinase family. Localized to the cytoplasm, Ethanolamine kinase catalyzes the first step in phosphatidylethanolamine (PtdEtn) biosynthesis via the CDP-Etn pathway. Ethanolamine kinase is specific for ethanolamine and exhibits negligible kinase activity on choline. Expressed in kidney, liver, placenta, heart, leukocyte, ovary and testis, Ethanolamine kinase exists as several isoforms as a result of alternative splicing events. The gene encoding Ethanolamine kinase maps to human chromosome 12, which encodes over 1,100 genes and comprises approximately 4.5% of the human genome. Chromosome 12 is associated with a variety of diseases and afflictions, including hypochondrogenesis, achondrogenesis, Kniest dysplasia, Noonan syndrome and trisomy 12p, which causes facial developmental defects and seizure disorders.

REFERENCES

1. Liu, Y., et al. 1998. Galactosemic cataractogenesis disrupts intracellular interactions and changes the substrate specificity of choline/ethanolamine kinase. *Exp. Eye Res.* 67: 193-202.
2. Kim, K., et al. 1999. Isolation and characterization of the *Saccharomyces cerevisiae* EK11 gene encoding ethanolamine kinase. *J. Biol. Chem.* 274: 14857-14866.
3. Yamazaki, N., et al. 2000. Novel expression of equivocal messages containing both regions of choline/ethanolamine kinase and muscle type carnitine palmitoyltransferase I. *J. Biol. Chem.* 275: 31739-31746.
4. Nyako, M., et al. 2001. Tissue-specific and developmental effects of the easily shocked mutation on ethanolamine kinase activity and phospholipid composition in *Drosophila melanogaster*. *Biochem. Genet.* 39: 339-349.
5. Kersting, M.C., et al. 2004. Regulation of the yeast EK11-encoded Ethanolamine kinase by inositol and choline. *J. Biol. Chem.* 279: 35353-35359.
6. Pascual, A., et al. 2005. Ethanolamine kinase controls neuroblast divisions in *Drosophila* mushroom bodies. *Dev. Biol.* 280: 177-186.

CHROMOSOMAL LOCATION

Genetic locus: ETNK1 (human) mapping to 12p12.1; Etnk1 (mouse) mapping to 6 G3.

SOURCE

Ethanolamine kinase (U-23) is a purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of Ethanolamine kinase of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Ethanolamine kinase (U-23) is recommended for detection of Ethanolamine kinase of mouse, human and hamster 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

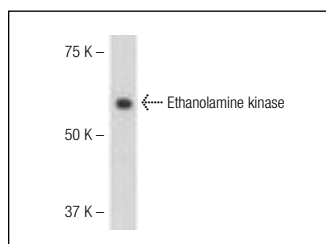
Suitable for use as control antibody for Ethanolamine kinase siRNA (h): sc-77291, Ethanolamine kinase siRNA (m): sc-77292, Ethanolamine kinase shRNA Plasmid (h): sc-77291-SH, Ethanolamine kinase shRNA Plasmid (m): sc-77292-SH, Ethanolamine kinase shRNA (h) Lentiviral Particles: sc-77291-V and Ethanolamine kinase shRNA (m) Lentiviral Particles: sc-77292-V.

Molecular Weight of Ethanolamine kinase: 60 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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).

DATA



Ethanolamine kinase (U-23): sc-130754. Western blot analysis of Ethanolamine kinase expression in CHO whole cell lysate.

SELECT PRODUCT CITATIONS

1. Esmaeili, 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.

RESEARCH USE

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

MONOS
Satisfaction
Guaranteed

Try **Ethanolamine kinase (3F11): sc-517100**, our highly recommended monoclonal alternative to Ethanolamine kinase (U-23).