

ETNK1 Antibody / Ethanolamine kinase 1 Antibody (FY13632)

Catalog No.	Formulation	Size
FY13632	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
UniProt	Q9HBU6
Applications	Western Blot : 0.5-1ug/ml Immunohistochemistry (FFPE) : 2-5ug/ml Immunofluorescence : 5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5 ug/ml
Limitations	This ETNK1 Antibody / Ethanolamine kinase 1 Antibody is supplied exclusively for research use.

ETNK1 Antibody by IF in A549 cells. Immunofluorescence analysis of A549 cells using Ethanolamine kinase 1 Antibody reveals green predominantly cytoplasmic staining surrounding blue DAPI-labeled nuclei. Cells were treated for antigen retrieval, blocked with goat serum, and incubated with 5 ug/mL primary antibody overnight at 40C. Bound antibody was detected using a fluorescent anti-rabbit secondary antibody.

ETNK1 Antibody by IHC in human ovarian carcinoma. Immunohistochemistry of paraffin-embedded human ovarian carcinoma using Ethanolamine kinase 1 Antibody demonstrates brown DAB staining in malignant epithelial cells with blue nuclear counterstaining. Heat-mediated antigen retrieval in EDTA buffer at pH 8.0 preceded incubation with 2 ug/mL primary antibody overnight at 40C and HRP-based visualization.

ETNK1 Antibody by FACS in A549 cells. Intracellular flow cytometry of fixed, permeabilized A549 cells using Ethanolamine kinase 1 Antibody shows a rightward fluorescence shift for antibody-stained cells (blue) relative to rabbit IgG isotype control (green) and unstained blank control (red). The experiment measures intracellular antigen staining rather than cell-surface binding.

ETNK1 Antibody by FACS in MCF-7 cells. Intracellular flow cytometry of fixed, permeabilized MCF-7 cells using Ethanolamine kinase 1 Antibody shows a rightward shift in fluorescence for antibody-stained cells (blue) relative to the rabbit IgG isotype control (green) and unstained control (red). Cells were fixed with paraformaldehyde before staining.

ETNK1 Antibody by WB in human A549 (lane 1), HepG2 (lane 2), and MCF-7 (lane 3) whole-cell lysates. Western blot analysis using Ethanolamine kinase 1 Antibody detects an immunoreactive band consistent with the expected molecular weight of approximately 51 kDa. Samples were prepared under reducing conditions, with 30 ug of total protein per lane, and resolved by 10% SDS-PAGE. The lanes contain human A549 (lane 1), HepG2 (lane 2), and MCF-7 (lane 3) whole-cell lysates. Proteins were transferred to nitrocellulose, blocked with 5% nonfat milk, and incubated with primary antibody at 0.5 ug/mL overnight at 4°C. HRP-conjugated secondary antibody and chemiluminescence were used for detection.

Description

ETNK1 Antibody / Ethanolamine kinase 1 Antibody recognizes an enzyme that catalyzes the phosphorylation of ethanolamine to phosphoethanolamine, the first committed step of the CDP-ethanolamine branch of the Kennedy pathway. This pathway supplies phosphatidylethanolamine, a major membrane phospholipid involved in bilayer organization, membrane curvature, and the function of numerous membrane-associated proteins. By controlling entry of ethanolamine into this biosynthetic route, ETNK1 contributes to the metabolic processes that maintain cellular membrane composition.

Following formation of phosphoethanolamine, additional enzymes convert it to CDP-ethanolamine and then incorporate the phosphoethanolamine head group into diacylglycerol. The resulting phosphatidylethanolamine is distributed among cellular membranes and participates in membrane remodeling. Phosphatidylethanolamine also contributes to mitochondrial membrane physiology and provides a lipid component required for conjugation reactions during autophagy. The Kennedy pathway is one of several routes influencing phosphatidylethanolamine abundance, so its contribution must be considered alongside lipid transport and alternative synthesis mechanisms.

ETNK1 uses ATP as the phosphate donor and belongs to a small family of ethanolamine kinase enzymes. Its catalytic activity is distinct from the subsequent cytidyltransferase and phosphotransferase reactions in the pathway. Changes in ethanolamine phosphorylation can affect the balance of free ethanolamine and phosphoethanolamine, potentially influencing metabolic networks beyond the final production of membrane phospholipids.

Somatic ETNK1 mutations have been identified in certain myeloid neoplasms, including atypical chronic myeloid leukemia and chronic myelomonocytic leukemia. Experimental studies have associated some mutations with altered enzymatic activity and phosphoethanolamine metabolism. These findings have prompted investigation into links among phospholipid precursors, mitochondrial physiology, and oxidative stress, although the full disease mechanism remains incompletely resolved.

NSJ Bioreagents offers this ETNK1 Antibody to help explore ethanolamine phosphorylation and its connections to membrane lipid metabolism and myeloid disease biology. ETNK1 illustrates how an early reaction in a biosynthetic pathway can influence both the supply of structural lipids and broader metabolic regulation.

Explore related research targets in our [Metabolism Antibody / Metabolism Antibodies](#) collection.

Application Notes

For best results, determine the optimal working dilution of the ETNK1 Antibody / Ethanolamine kinase 1 Antibody experimentally.

Immunogen

The ETNK1 Antibody was generated using e. coli-derived human ETNK1 recombinant protein (amino acids S10-Q401).

Storage

Once reconstituted, refrigerate the ETNK1 Antibody at 4oC for no longer than one month. For extended storage, freeze aliquots at -20oC for up to six months and avoid repeated freeze-thaw cycles.

Alternate Names

ETNK1 antibody, Ethanolamine kinase 1 antibody, EK11 antibody, EK1 1 antibody, ETNK1 rabbit polyclonal antibody