Datasheet for ABIN7194161

AK4 Protein

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Overview

Quantity:	50 µg
Target:	AK4
Origin:	Human
Source:	Baculovirus infected Insect Cells
Protein Type:	Recombinant

Product Details

Purpose:	Recombinant Human AK4/AK3L1 Protein
Sequence:	Ala 2-Tyr 223
Characteristics:	A DNA sequence encoding the human AK4 (P27144-1) (Ala 2-Tyr 223) was expressed and purified with two additional amino acids (Gly & Pro) at the N-terminus.
Purity:	> 95 % as determined by reducing SDS-PAGE.
Endotoxin Level:	< 1.0 EU per µg as determined by the LAL method.

Target Details

Target:	AK4
Alternative Name:	AK4/AK3L1 (AK4 Products)
Background:	Background: Adenylate kinase isoenzyme 4; mitochondrial; also known as ATP-AMP transphosphorylase; Adenylate kinase 3-like; AK4 and AK3L1; is a member the adenylate kinase family. AK4 / AK3L1 is localized to the mitochondrial matrix. Adenylate kinases regulate the adenine and guanine nucleotide compositions within a cell by catalyzing the reversible transfer

Target Details

	of phosphate group among these nucleotides. Five isozymes of adenylate kinase have been identified in vertebrates. Expression of these isozymes is tissue-specific and developmentally regulated. AK4 / AK3L1 catalyzes the reversible transfer of the terminal phosphate group between ATP and AMP. It may also be active with GTP. Adenylate kinase 4 (AK4 / AK3L1) is a unique member with no enzymatic activity in the adenylate kinase (AK) family although it shares high sequence homology with other AKs. It remains unclear what physiological function AK4 might play or why it is enzymatically inactive. AK4 / AK3L1 retains the capability of binding nucleotides. It has a glutamine residue instead of a key arginine residue in the active site well conserved in other AKs. The enzymatically inactive AK4 is a stress responsive protein critical to cell survival and proliferation. AK4 / AK3L1 is likely that the interaction with the mitochondrial inner membrane protein ANT is important for AK4 to exert the protective benefits to cells under stress. AK4 / AK3L1 also acts on the specific mechanism of energy metabolism rather than control of the homeostasis of the ADP pool ubiquitously. Synonym: AK3;AK3L1;AK3L2;AK4
Molecular Weight:	25.3 kDa
Pathways:	Nucleotide Phosphorylation, Ribonucleoside Biosynthetic Process

Application Details

Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	Please refer to the printed manual for detailed information.
Buffer:	Lyophilized from sterile 20 mM Tris, 500 mM NaCl, pH 8.0
Storage:	4 °C,-20 °C,-80 °C
Storage Comment:	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.