Recombinant Human AMPK (G1/B2/A1) Heterotrimer Protein

Catalog Number: PKSH030313

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

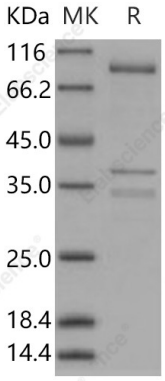
Description

Species	Human
Source	Baculovirus-Insect Cells-derived Human AMPK (G1/B2/A1) Heterotrimer protein Met 1-Pro 331&Met 1-Ile 272&Met 1-Gln 559, with an N-terminal His & GST
Calculated MW	30 kDa/38 kDa/92 kDa
Observed MW	35 kDa/37 kDa/95 kDa
Accession	P54619;O43741;Q13131-1
Bio-activity	The specific activity was determined to be 6 nmol/min/mg using synthetic SAMS peptide (HMRSAMSGLHLVKRR) as substrate.

Properties

Purity	> 94% as determined by reducing SDS-PAGE.
Concentration	Subject to label value.
Endotoxin	< 1.0 EU per μg of the protein as determined by the LAL method.
Storage	Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.
Shipping	This product is provided as liquid. It is shipped at frozen temperature with blue ice/ gel packs. Upon receipt, store it immediately at < - 20°C.
Formulation	Supplied as sterile solution of 50 mM Tris, 200 mM NaCl, 2 mM GSH, 1 mM EDTA, 1 mM DTT, 10% glycerol, pH 7.4

Data



> 94 % as determined by reducing SDS-PAGE.

Background

AMP/ATP-binding subunit of AMP-activated protein kinase (AMPK), an energy sensor protein kinase that plays a key role in regulating cellular energy metabolism (PubMed:21680840, PubMed:24563466). In response to reduction of intracellular ATP levels, AMPK activates energy-producing pathways and inhibits energy-consuming processes: inhibits protein, carbohydrate and lipid biosynthesis, as well as cell growth and proliferation (PubMed:21680840, PubMed:24563466). AMPK acts via direct phosphorylation of metabolic enzymes, and by longer-term effects via phosphorylation of transcription regulators (PubMed:21680840, PubMed:24563466). Also acts as a regulator of cellular polarity by remodeling the actin cytoskeleton; probably by indirectly activating myosin (PubMed:21680840, PubMed:24563466). Gamma non-catalytic subunit mediates binding to AMP, ADP and ATP, leading to activate or inhibit.

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