abcam

Product datasheet

Recombinant Human LKB1 + CAB39 + LYK5 protein ab95249

1 Image

Description

Product name	Recombinant Human LKB1 + CAB39 + LYK5 protein
Purity	> 70 % SDS-PAGE. Affinity purified.
Expression system	Baculovirus infected insect cells
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human

Specifications

Our **Abpromise guarantee** covers the use of **ab95249** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	SDS-PAGE
Form	Liquid

Preparation and Storage

Stability and Storage	Shipped on Dry Ice. Upon delivery aliquot. Store at -80°C. Avoid freeze / thaw cycle. pH: 8.00 Constituents: 0.0462% (R*,R*)-1,4-Dimercaptobutan-2,3-diol, 0.395% Tris HCl, 0.05% Tween, 10% Glycerol (glycerin, glycerine), 0.58% Sodium chloride

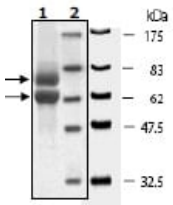
General Info

Relevance	LKB1 regulates cell polarity and functions as a tumor suppressor. Mutations in this gene have been associated with Peutz-Jeghers syndrome, an autosomal dominant disorder characterized by the growth of polyps in the gastrointestinal tract, pigmented macules on the skin and mouth, and other neoplasms. Mouse protein 25 alpha (MO25 alpha, CAB39) is a 40-kDa protein that,

together with the STE20-related adaptor-alpha (STRAD alpha) pseudo kinase, forms a regulatory complex capable of stimulating the activity of the LKB1 tumor suppressor protein kinase. The latter is mutated in the inherited Peutz-Jeghers cancer syndrome (PJS). CAB39 binds directly to a conserved Trp-Glu-Phe sequence at the STRAD alpha C terminus, markedly enhancing binding of STRAD alpha to LKB1 and increasing LKB1 catalytic activity. Skeletal muscle contraction results in the phosphorylation and activation of the AMP-activated protein kinase (AMPK) by an upstream kinase (AMPKK). The LKB1-STE-related adaptor (STRAD)-mouse protein 25 (MO25) complex is the major AMPKK in skeletal muscle; however, LKB1-STRAD-MO25 activity is not increased by muscle contraction. This relationship suggests that phosphorylation of AMPK by LKB1-STRAD-MO25 during skeletal muscle contraction may be regulated by allosteric mechanisms. Members of the STE-20 like kinase family are known to stimulate MAPK pathways by directly activating MAPKKK. LYK5 is a novel pseudokinase member of this family consisting of a STE-20 like kinase domain but lacks several residues that are required for its catalytic activity. It specifically binds LKB1 and plays a key role in regulating the tumor suppressor activities of LKB1. It functions as an upstream activator of LKB1 and also directs the sub-cellular localization of LKB1 by anchoring it in the cytoplasm. LYK5-LKB1 interaction results in phosphorylation of LYK5 and enhanced autophosphorylation of LKB1.

Cellular localization Cytoplasmic and Nuclear

Images



SDS-PAGE - Recombinant Human LKB1 + CAB39 + LYK5 protein (ab95249)

SDS-PAGE showing ab95249 at approximately 49, 66 and 74 kDa (10µg). Smaller band represents LKB1, larger band represents CAB39 and LYK5. Lane 2 represent the MW marker ladder.

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