abcam

Product datasheet

Recombinant human Raf1 (mutated Y341E + Y341E) protein ab55721

4 Images

Description

Product name	Recombinant human Raf1 (mutated Y341E + Y341E) protein
Biological activity	Specific Activity: approximately 6000 nmol/min/mg.
Expression system	Baculovirus infected Sf9 cells
Accession	P04049-1
Protein length	Protein fragment
Animal free	No
Nature	Recombinant
Species	Human
Predicted molecular weight	63 kDa
Amino acids	306 to 648
Modifications	mutated Y340 + Y341
Tags	GST tag N-Terminus
Additional sequence information	Recombinant fragment, corresponding to amino acids 306-end of Human Raf 1, and containing the mutations Y340E Y341E.

Specifications

Our Abpromise guarantee covers the use of **ab55721** in the following tested applications.

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

Applications	Functional Studies SDS-PAGE
Form	Liquid
Additional notes	It has been confirmed that ab55721 contains the mutations Y340E and Y341E by DNA sequencing.

Preparation and Storage

Stability and Storage	Shipped on dry ice. Upon delivery aliquot and store at -80ºC. Avoid freeze / thaw cycles.

pH: 7.50
Constituents: 0.0038% EGTA, 0.00174% PMSF, 0.00385% DTT, 0.79% Tris HCl, 0.00292% EDTA, 25% Glycerol, 0.87% Sodium chloride

This product is an active protein and may elicit a biological response in vivo, handle with caution.

General Info

Function

Involved in the transduction of mitogenic signals from the cell membrane to the nucleus. Part of the Ras-dependent signaling pathway from receptors to the nucleus. Protects cells from apoptosis mediated by STK3.

Tissue specificity

In skeletal muscle, isoform 1 is more abundant than isoform 2.

Involvement in disease

Defects in RAF1 are the cause of Noonan syndrome type 5 (NS5) [MIM:611553]. Noonan syndrome (NS) is a disorder characterized by dysmorphic facial features, short stature, hypertelorism, cardiac anomalies, deafness, motor delay, and a bleeding diathesis. It is a genetically heterogeneous and relatively common syndrome, with an estimated incidence of 1 in 1000-2500 live births.
Defects in RAF1 are the cause of LEOPARD syndrome type 2 (LEOPARD2) [MIM:611554]. LEOPARD syndrome is an autosomal dominant disorder allelic with Noonan syndrome. The acronym LEOPARD stands for lentigines, electrocardiographic conduction abnormalities, ocular hypertelorism, pulmonic stenosis, abnormalities of genitalia, retardation of growth, and deafness.

Sequence similarities

Belongs to the protein kinase superfamily. TKL Ser/Thr protein kinase family. RAF subfamily.
Contains 1 phorbol-ester/DAG-type zinc finger.
Contains 1 protein kinase domain.
Contains 1 RBD (Ras-binding) domain.

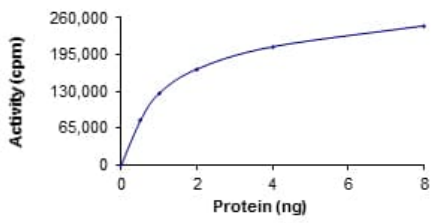
Post-translational modifications

Phosphorylated upon DNA damage, probably by ATM or ATR. Phosphorylation at Thr-269 increases its kinase activity. Phosphorylation at Ser-259 induces the interaction with YWHAZ and inactivates kinase activity. Dephosphorylation of Ser-259 by the complex containing protein phosphatase 1, SHOC2 and M-Ras/MRAS relieves inactivation, leading to stimulate RAF1 activity.

Cellular localization

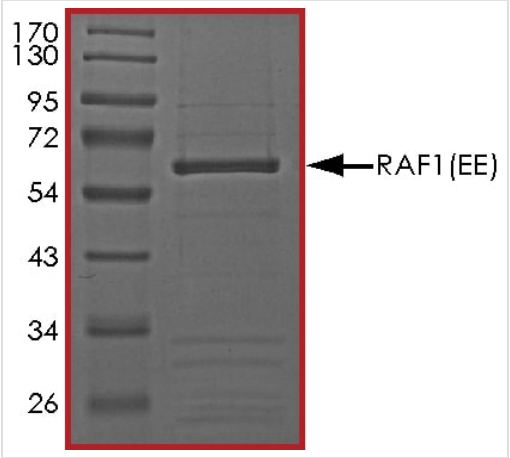
Cytoplasm. Cell membrane. Colocalizes with RGS14 and BRAF in both the cytoplasm and membranes.

Images



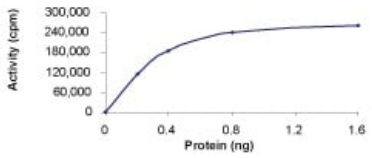
Functional Studies - Recombinant human Raf1 (mutated Y341E + Y341E) protein (ab55721)

The specific activity of Raf1 (ab55721) was determined to be ~5600 nmol/min/mg as per activity assay protocol



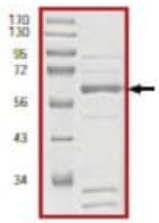
SDS PAGE analysis of ab55721

SDS-PAGE - Recombinant human Raf1 (mutated Y341E + Y341E) protein (ab55721)



Kinase activity assay using ab55721. Specific activity: approximately 6000 nmol/min/mg.

Functional Studies - Recombinant human Raf1 (mutated Y341E + Y341E) protein (ab55721)



SDS-PAGE analysis of ab55721 with molecular weight markers. Approximate molecular weight: 63kDa

SDS-PAGE - Recombinant human Raf1 (mutated Y341E + Y341E) protein (ab55721)

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