Recombinant Human KRAS protein ab96817

Description

Product name: Recombinant Human KRAS protein
Purity: > 90% SDS-PAGE.
ab96817 is purified using conventional chromatography techniques.

Expression system: Escherichia coli
Accession: P01116-2
Protein length: Full length protein
Animal free: No
Nature: Recombinant
Species: Human

Sequence:

MGSSHHHHHH SSGLVPRGSH MTEYKLVVVG
AGGVGKSALT IQLIQNFVY EDPTIEDSY
RKQV/IDGET CLLDLIDTAG HEEYSAMRDQ
YMRTGEGFLC VFAINNTKSF EDIHHYREQI
KRVKDSDVPL MVLG/NKCDL PSRTVDTKQA
QDLARSYGP FETSATRQ GVDDAFYTLV
REIRKHKEKM SKDGKKKKKK SKTKC

Predicted molecular weight: 23 kDa including tags
Amino acids: 1 to 185
Tags: His tag N-Terminus

Additional sequence information: Corresponds to K-Ras4B (Isoform 2B)

Specifications

Our Abpromise guarantee covers the use of ab96817 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications

- Mass Spectrometry
- SDS-PAGE
- Western blot

Mass spectrometry: MALDI-TOF-TOF

Form: Liquid
### Additional notes

Isoform 2B

### Preparation and Storage

#### Stability and Storage

Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.

pH: 8.00
Constituents: 0.0154% DTT, 0.316% Tris HCl, 10% Glycerol, 0.58% Sodium chloride

### General Info

#### Function

Ras proteins bind GDP/GTP and possess intrinsic GTPase activity.

#### Involvement in disease

Defects in KRAS are a cause of acute myelogenous leukemia (AML) [MIM:601626]. AML is a malignant disease in which hematopoietic precursors are arrested in an early stage of development.

Defects in KRAS are a cause of juvenile myelomonocytic leukemia (JMML) [MIM:607785]. JMML is a pediatric myelodysplastic syndrome that constitutes approximately 30% of childhood cases of myelodysplastic syndrome (MDS) and 2% of leukemia. It is characterized by leukocytosis with tissue infiltration and in vitro hypersensitivity of myeloid progenitors to granulocyte-macrophage colony stimulating factor.

Defects in KRAS are the cause of Noonan syndrome type 3 (NS3) [MIM:609942]. Noonan syndrome (NS) [MIM:163950] 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. Rarely, NS is associated with juvenile myelomonocytic leukemia (JMML).

NS3 inheritance is autosomal dominant.

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NS3 inheritance is autosomal dominant.

Defects in KRAS are a cause of gastro-intestinal or stomach cancer. Gastric cancer is a malignant disease which starts in the stomach, can spread to the esophagus or the small intestine, and can extend through the stomach wall to nearby lymph nodes and organs. It also can metastasize to other parts of the body. The term gastric cancer or gastric carcinoma refers to adenocarcinoma of the stomach that accounts for most of all gastric malignant tumors. Two main histologic types are recognized, diffuse type and intestinal type carcinomas. Diffuse tumors are poorly differentiated infiltrating lesions, resulting in thickening of the stomach. In contrast, intestinal tumors are usually exophytic, often ulcerating, and associated with intestinal metaplasia of the stomach, most often observed in sporadic disease.

Note=Defects in KRAS are a cause of pyloric atrophy (PA). Pyloric atrophy is a neoplasm of the brain and spinal cord derived from glial cells which vary from histologically benign to highly anaplastic and malignant tumors.

Defects in KRAS are a cause of cardiofaciocutaneous syndrome (CFC syndrome) [MIM:115150]; also known as cardio-facio-cutaneous syndrome. CFC syndrome is characterized by a distinctive facial appearance, heart defects and mental retardation. Heart defects include pulmonic stenosis, atrial septal defects and hypertrophic cardiomyopathy. Some affected individuals present with ectodermal abnormalities such as sparse, friable hair, hyperkeratotic skin lesions and a generalized ichthyosis-like condition. Typical facial features are similar to Noonan syndrome. They include high forehead with bitemporal constriction, hypoplastic supraorbital ridges, downslanting palpebral fissures, a depressed nasal bridge, and posteriorly angulated ears with prominent helices. The inheritance of CFC syndrome is autosomal dominant.

Note=KRAS mutations are involved in cancer development.

### Sequence similarities

Belongs to the small GTPase superfamily. Ras family.
Cellular localization

- Cell membrane.

Images

**Mass Spectrometry - Recombinant Human KRAS protein (ab96817)**

MALTI-TOF result: of 23253.422 Da for Human KRAS Protein.

**15% SDS-PAGE showing ab96817 at approximately 23.2 kDa (3 µg).**

**Western blot - Recombinant Human KRAS protein (ab96817)**

This blot was produced using a 4-12% Bis-tris gel under the MES buffer system. The gel was run at 200V for 35 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 5% Bovine Serum Albumin before being incubated with ab84573 overnight at 4°C. Antibody binding was detected using an anti-rabbit antibody conjugated to HRP, and visualised using ECL development solution.

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