

KRAS Protein, Human, Recombinant (G12V, His)

General Information

Synonyms:	KRAS2;RASK2;c-K-ras;Ki-Ras;CFC2
Protein Construction:	Thr2-Cys185(Gly12Val)
Species:	Human
Expression Host:	E. coli
Accession:	AAH13572.1
Molecular Weight:	25-30 KDa (reducing condition)
AA Sequence:	Thr2-Cys185(Gly12Val)

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	Greater than 95% as determined by reducing SDS-PAGE. (QC verified)
Endotoxin:	< 0.1 ng/μg (1 EU/μg) as determined by LAL test.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

K-Ras belongs to the small GTPase superfamily, Ras family. As other members of the Ras family, K-Ras is a GTPase and is an early player in many signal transduction pathways. It is usually tethered to cell membranes because of the presence of an isoprenyl group on its C-terminus. K-Ras functions as a molecular on/off switch. Ras proteins bind GDP/GTP and possess intrinsic GTPase activity. Plays an important role in the regulation of cell proliferation. Plays a role in promoting oncogenic events by inducing transcriptional silencing of tumor suppressor genes (TSGs)

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in colorectal cancer (CRC) cells in a ZNF304-dependent manner. Besides essential function in normal tissue signaling, the mutation of a K-Ras gene is an essential step in the development of many cancers. Several germline K-Ras mutations have been found to be associated with Noonan syndrome[4] and cardio-facio-cutaneous syndrome. Somatic K-Ras mutations are found at high rates in Leukemias, colon cancer, pancreatic cancer and lung cancer.

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