Recombinant Human GTPase KRas/KRAS (G12C) (GMPPNP load)Protein

Catalog No.: RP03581LQ

Sequence Information

Species	Gene ID
Human	3845
Swiss Prot	**Tags**
P01116-2	N-8His

Synonyms

NS; NS3; OES; CFC2; RALD; K-Ras; KRAS1; KRAS2; RASK2; KI-RAS; C-K-RAS; K-RAS2A; K-RAS2B; K-RAS4A; K-RAS4B; K-Ras 2; 'C-K-RAS; c-Ki-ras; c-Ki-ras2

Product Information

Source	Purification
E. coli	≥ 95 % as determined by SDS-PAGE.

Calculated MWObserved MW

21.7KD

Endotoxin

Please contact us for more information.

Formulation

Supplied as a 0.22 μm filtered solution in 50 mM Tris, 150 mM NaCl, 1 mM TCEP, 1 mM MgCl2, 10% glycerol, pH7.5

Reconstitution

Background

K-Ras is a small GTPase of the Ras family that acts as a molecular on/off switch in signal transduction. It is anchored to cell membranes via a C-terminal isoprenyl group. In its active, GTP-bound state, it recruits and activates downstream effectors such as c-Raf and PI3-kinase. It has intrinsic GTPase activity that slowly converts GTP to GDP, turning itself off. This inactivation is accelerated by GAPs (e.g., RasGAP), while activation is promoted by GEFs (e.g., SOS1), which facilitate GDP release and GTP binding. Germline K-Ras mutations cause Noonan and cardio-facio-cutaneous syndromes; somatic mutations are common in leukemias and colon, pancreatic, and lung cancers.

Basic Information

Description

Recombinant Human GTPase KRas/KRAS (G12C) (GMPPNP load) Protein is produced by *E. coli* expression system. The target protein is expressed with sequence of Human GTPase KRas/KRASS (G12C) (Accession #)fused with N-terminal 8x his tag.

Activity

The KRAS[G12C](GmppNp loaded) activity was quantified using a HTRF-based assay. The reaction was performed by incubating the KRAS[G12C](GmppNp loaded) protein, GTP and substrate. Showed high activity in HTRF assay.

Shipping

Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage

Store at -70℃

Operational Notes

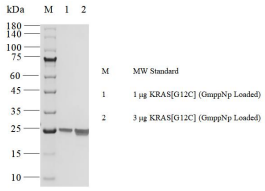
For your safety and health, please wear a lab coat and disposable gloves for handling.

Contact

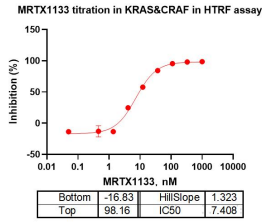
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Validation Data



Recombinant Human GTPase KRas/KRAS (G12C) (GMPPNP load)Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.



The KRAS[G12C](GmppNp loaded) activity was quantified using a HTRF-based assay. The reaction was performed by incubating the KRAS[G12C](GmppNp loaded) protein, GTP and substrate, the donor and receptor at 25℃ for 60 min, then measuring the 665nm/620nm fluorescence signal ratio on BMG.