

## Recombinant KRAS (1-186) protein

---

**Catalog No:** 81475, 81575

**Expressed In:** *E. coli*

**Quantity:** 50, 1000 µg

**Concentration:** 0.5 µg/µl

**Source:** Human

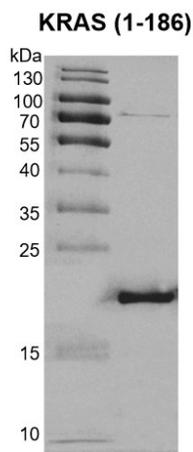
**Buffer Contents:** Recombinant KRAS (1-186) protein is supplied in 25 mM Tris 8.0, 300mM NaCl, 20% glycerol, 0.5 mM TCEP.

**Background:** **KRAS (GTPase KRas)** protein is a GDP/GTP binding protein, and the more important genes of the same family include HRAS and NRAS. **KRAS** is activated when combined with GTP and closed when combined with GDP. **KRAS** can be transiently activated by growth factors or tyrosine kinases (such as EGFR). The activated **KRAS** can activate downstream signals such as PI3K-AKT-mTOR that control cell production pathway, and the RAS-RAF-MEK-ERK signaling pathway that controls cell proliferation. Mutant **KRAS** will continue to be activated even without activation of kinases such as EGFR, resulting in continued cell proliferation and eventually canceration. **KRAS** mutations are found in a variety of tumors, the most common ones include lung cancer and pancreatic cancer.

**Protein Details:** Recombinant KRAS (1-186) protein that includes amino acids 1-186 of human KRAS protein (accession number NP\_203524.1 was expressed in *E. coli* cells with an C-terminal 6xHis tag. The molecular weight of the protein is 22.36 kDa.

**Application Notes:** This product was manufactured as described in Protein Details. Where possible, Active Motif has developed functional or activity assays for recombinant proteins. Additional characterization such as enzyme kinetic activity assays, inhibitor screening or other biological activity assays may not have been performed for every product. All available data for a given product is shown on the lot-specific Technical Data Sheet.

**Storage and Guarantee:** Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is for research use only and is not for use in diagnostic procedures. This product is guaranteed for 6 months from date of arrival.



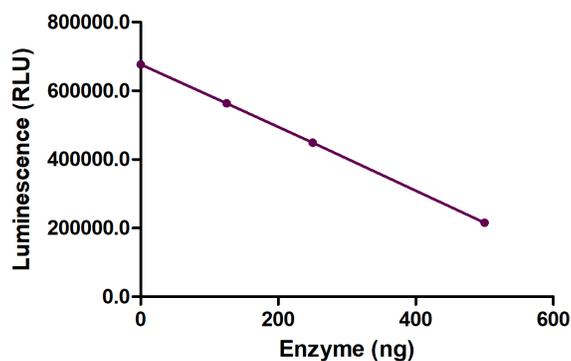
**Recombinant KRAS (1-186) protein gel.**

12.5% SDS-PAGE gel stained with Coomassie Blue

MW: 22.36 kDa

Purity: >90%

**KRAS (1-186) Titration**



**GTPase-Glo assay for KRAS (1-186) activity**

1  $\mu$ M rGTP and 0.5 mM DTT was incubated with different concentrations of KRAS (1-186) in GTPase/ GAP Buffer for 60 minutes at room temperature, the total reaction volume was 5 $\mu$ l. To the completed GTPase reactions, we added 5 $\mu$ l of reconstituted GTPase-Glo™ Reagent to each well and incubated the plate for 30 minutes. Then detection Reagent (10 $\mu$ l) was added, reactions were incubated for 10 minutes and luminescence was measured.