

## Product description



**Product name** KRAS-2B  
G12R mutant  
SIL-protein



**Catalog number** RA147211

**Uniprot ID** P01116-2

**KRAS-2B:** Human KRAS isoform 2B plays an important role in the regulation of cell proliferation and in promoting oncogenic events. In particular, KRAS G12C mutation predominates in NSCLC (Non small cells lung cancer), as well as in pancreatic and colorectal cancer.

Labelled KRAS is a recombinant protein, stable isotope labelled (SIL), designed for use as an internal standard for quantitative analysis of RAS by mass spectrometry (MS) (1,2).

**Synonyms:** GTPase Kras, K-Ras 2, c-K-ras, Ki-Ras

## Protein sequence

KRAS\_2B\_G12R

MHHHHHHGKPIPNPLLGLDSTENLYFQGIDPFTTEYKLVVVVGARGVGSALTIQLIQNHVFVDEYDPTIEDSYRKQVVIDGETCLLDILDITAGQEE  
YSAMRDQYMRTGEGFLCVFAINNTKSFEDIHHYREQIKRVKQDSEVPMVLVGNKCDLPSRTVDTKQAQDLARSYGIPFIETSAKTRQGVDDAF  
YTLVREIRKHKEK

## Product features and protocols

### Key features

- 1** Purity >95%  
as determined by SDS-PAGE
- 2** Labelling Arg-<sup>13</sup>C<sub>6</sub>, <sup>15</sup>N<sub>4</sub> | Lys-<sup>13</sup>C<sub>6</sub>, <sup>15</sup>N<sub>2</sub>
- 3** Isotopic incorporation >98%  
as determined by LC-MS/MS  
analysis of digested SIL-protein

### Other features

Predicted MW	22.996 kDa
Expression System	E.coli
Purification Tag	polyHis tag at the N-terminus end
Protein content	Quantitation is carried out by UV Absorbance at 280 nm
Formulation	Lyophilized 150 mM NaCl, 2 mM MgCl <sub>2</sub> 20 mM HEPES pH 7.5

### Product preparation

For product preparation we recommend the following steps:

- Briefly centrifuge the tube before opening
- Reconstitute by adding the appropriate volume of ultrapure water for a final concentration of 200 µg/ml (e.g. 50 µl for 10 µg or 250 µl for 50 µg conditioning)
- Vortex gently to insure complete dissolution
- Wait 15 minutes at Room temperature before proceeding further
- Vortex gently again and centrifuge briefly

### Product storage

The product is lyophilized and shipped at room temperature. **Store at -80 °C upon receipt.**

After reconstitution, the protein can be preserved at 4°C for a few weeks.

### Avoid multiple freeze-thaw cycles

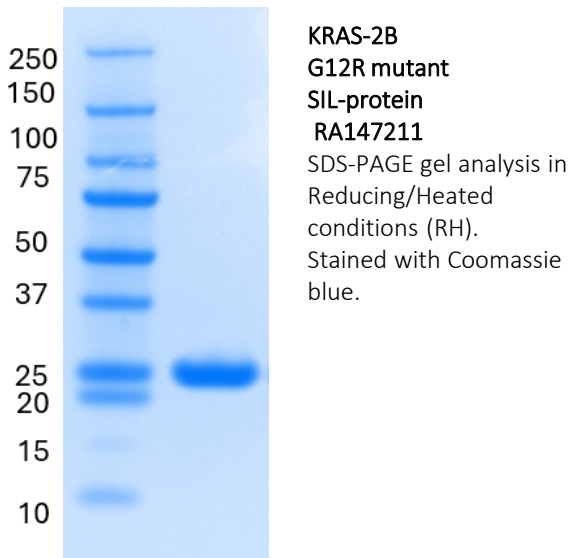
## How to use our product



SIL proteins allow to overcome the process variability since they are added at the very beginning of a sample preparation. This has potential positive impact on your analyte quantification, especially if the analyte interacts with other species commonly present within the matrix (1).



## Supporting information



## References

1. **G.Picard, D. Lebert, et al.** PSAQ standards for accurate MS-based quantification of proteins: from the concept to biomedical applications, *J. Mass Spectrom.* 2012, 47, 1353-1363
2. **M. R. Janes et al.** Targeting KRAS Mutant Cancers with a Covalent G12C-Specific Inhibitor 2018, *Cell* 172, 578–589



The product is intended for research use only. Not for diagnostic or therapeutic use.

## Legal

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<b>Promise Proteomics</b>	DATA SHEET_RA147211_V01_KRAS-2B G12R
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	<b>Name Surname</b>	<b>Position</b>	<b>Date</b>	<b>Signature</b>
<b>Writing</b>	Wilfried Bardet	Bioproduction Manager	29JAN2025	
<b>Review</b>	Melanie Quintero	Project Associate	29JAN2025	
<b>Approval</b>	Wilfried Bardet	Bioproduction Manager	29JAN2025	

Version	Application date	Modifications history
01	29JAN2025	Creation