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# Produktinformation

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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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## Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

## Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand


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SANTA CRUZ BIOTECHNOLOGY, INC.

# K-Ras (3B10-2F2): sc-517599

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

The mammalian Ras (also designated v-Ha-Ras, Harvey rat sarcoma viral oncogene homolog, HRAS1, K-Ras, N-Ras, RASH1 or c-bas/has) gene family consists of the Harvey and Kirsten Ras genes (c-H-Ras1 and c-K-Ras2), an inactive pseudogene of each (c-H-Ras2 and c-K-Ras1) and the N-Ras gene. The three Ras oncogenes, H-Ras, K-Ras and N-Ras, encode proteins with GTP/GDP binding and GTPase activity. Ras proteins alternate between an inactive form bound to GDP and an active form bound to GTP, activated by a guanine nucleotide-exchange factor (GEF) and inactivated by a GTPase-activating protein (GAP). Ras nomenclature originates from the characterization of human DNA sequences homologous to cloned DNA fragments containing oncogenic sequences of a type C mammalian retrovirus, the Harvey strain of murine sarcoma virus (HaMSV), derived from the rat. Under normal conditions, Ras family members influence cell growth and differentiation events in a subcellular membrane compartmentalization-based signaling system. Oncogenic Ras can deregulate processes that control both cell proliferation and apoptosis. The Ras superfamily of GTP hydrolysis-coupled signal transduction relay proteins can be subclassified into Ras, Rho, Rab and ARF families.

## REFERENCES


1. Wong-Staal, F., Dalla-Favera, R., Franchini, G., Gelmann, E.P. and Gallo, R.C. 1981. Three distinct genes in human DNA related to the transforming genes of mammalian sarcoma retroviruses. Science 213: 226-228.
2. Cox, A.D. and Der, C.J. 2003. The dark side of Ras: regulation of apoptosis. Oncogene 22: 8999-9006.
3. Colicelli, J. 2004. Human Ras superfamily proteins and related GTPases. Sci. STKE 2004: RE13.
4. Weber, M.J. and Gioeli, D. 2004. Ras signaling in prostate cancer progression. J. Cell. Biochem. 91: 13-25.
5. Giehl, K. 2005. Oncogenic Ras in tumour progression and metastasis. Biol. Chem. 386: 193-205.
6. Hancock, J.F. and Parton, R.G. 2005. Ras plasma membrane signalling platforms. Biochem. J. 389: 1-11.
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8. Mor, A. and Philips, M.R. 2006. Compartmentalized Ras/MAPK signaling. Annu. Rev. Immunol. 24: 771-800.
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## CHROMOSOMAL LOCATION

Genetic locus: KRAS (human) mapping to 12p12.1.

## SOURCE

K-Ras (3B10-2F2) is a mouse monoclonal antibody raised against a full length recombinant K-Ras of human origin.

## PRODUCT

Each vial contains 100 µg $IgG_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

K-Ras (3B10-2F2) is recommended for detection of K-Ras of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for K-Ras siRNA (h): sc-35731, K-Ras shRNA Plasmid (h): sc-35731-SH and K-Ras shRNA (h) Lentiviral Particles: sc-35731-V.

Molecular Weight of K-Ras: 21 kDa.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## SELECT PRODUCT CITATIONS


1. Khan, H.Y., Nagasaka, M., Li, Y., Aboukameel, A., Uddin, M.H., Sexton, R., Bannoura, S., Mzannar, Y., Al-Hallak, M.N., Kim, S., Beydoun, R., Landesman, Y., Mamdani, H., Uprety, D., et al. 2022. Inhibitor of the nuclear transport protein XPO1 enhances the anticancer efficacy of KRAS G12C inhibitors in preclinical models of KRAS G12C-mutant cancers. Cancer Res. Commun. 2: 342-352.


## STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.