SANTA CRUZ BIOTECHNOLOGY, INC.

K-Ras (h): 293T Lysate: sc-111225

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 sub-cellular 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

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3. Colicelli, J. 2004. Human Ras superfamily proteins and related GTPases. Sci. STKE 2004: RE13.
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5. Giehl, K. 2005. Oncogenic Ras in tumour progression and metastasis. Biol. Chem. 386: 193-205.
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STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

CHROMOSOMAL LOCATION

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

PRODUCT

K-Ras (h): 293T Lysate represents a lysate of human K-Ras transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

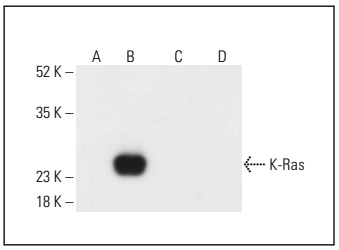
APPLICATIONS

K-Ras (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive K-Ras antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-tranfected 293T cells.

K-Ras (F234): sc-30 is recommended as a positive control antibody for Western Blot analysis of enhanced human K-Ras expression in K-Ras transfected 293T cells (starting dilution 1:200, dilution range 1:100-1:1,000).

DATA



K-Ras (F234): sc-30. Western blot analysis of K-Ras expression in non-transfected 293T: sc-117752 (**A**), human K-Ras transfected 293T: sc-111225 (**B**), human N-Ras transfected 293T (**C**) and human H-Ras transfected 293T (**D**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102. Note lack of reactivity with human N-Ras in lane **C** and human H-Ras in lane **D**.

RESEARCH USE

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