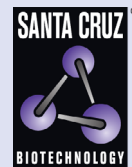


N-Ras (F155): sc-31



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

1. Wong-Staal, F., et al. 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.

CHROMOSOMAL LOCATION

Genetic locus: NRAS (human) mapping to 1p13.2; Nras (mouse) mapping to 3 F2.2.

SOURCE

N-Ras (F155) is a mouse monoclonal antibody raised against recombinant N-Ras p21 of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

N-Ras (F155) is available conjugated to agarose (sc-31 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-31 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-31 PE), fluorescein (sc-31 FITC), Alexa Fluor® 488 (sc-31 AF488), Alexa Fluor® 546 (sc-31 AF546), Alexa Fluor® 594 (sc-31 AF594) or Alexa Fluor® 647 (sc-31 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-31 AF680) or Alexa Fluor® 790 (sc-31 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

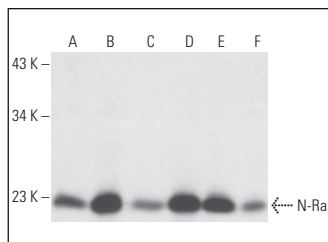
N-Ras (F155) is recommended for detection of N-Ras p21 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for N-Ras siRNA (h): sc-36004, N-Ras siRNA (m): sc-36005, N-Ras shRNA Plasmid (h): sc-36004-SH, N-Ras shRNA Plasmid (m): sc-36005-SH, N-Ras shRNA (h) Lentiviral Particles: sc-36004-V and N-Ras shRNA (m) Lentiviral Particles: sc-36005-S.

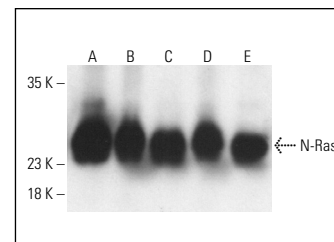
Molecular Weight of N-Ras: 21 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, A-431 whole cell lysate: sc-2201 or Jurkat whole cell lysate: sc-2204.

DATA



N-Ras (F155): sc-31. Western blot analysis of N-Ras expression in HeLa (A), A-431 (B), Jurkat (C), NIH/3T3 (D), NRK (E) and F9 (F) whole cell lysates.



N-Ras (F155): sc-31. Western blot analysis of N-Ras expression in MCF7 (A), Jurkat (B), A-431 (C), NIH/3T3 (D) and KNRK (E) whole cell lysates. Detection reagent used: m-IgG₁ BP-HRP: sc-525408.

SELECT PRODUCT CITATIONS

1. Arany, I., et al. 1994. Analysis of multiple molecular changes in human endocrine tumours. *Surg. Oncol.* 3: 153-159.
2. Botton, T., et al. 2019. Genetic heterogeneity of BRAF fusion kinases in melanoma affects drug responses. *Cell Rep.* 29: 573-588.e7.
3. Nair, A., et al. 2020. Ras isoforms: signaling specificities in CD40 pathway. *Cell Commun. Signal.* 18: 3.
4. Ito, T., et al. 2021. Paralog knockout profiling identifies DUSP4 and DUSP6 as a digenic dependence in MAPK pathway-driven cancers. *Nat. Genet.* 53: 1664-1672.
5. Rudnik, S., et al. 2022. S-palmitoylation determines TMEM55B-dependent positioning of lysosomes. *J. Cell Sci.* 135: jcs258566.
6. Abe, T., et al. 2023. LZTR1 deficiency exerts high metastatic potential by enhancing sensitivity to EMT induction and controlling KLHL12-mediated collagen secretion. *Cell Death Dis.* 14: 556.

STORAGE

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