

H-Ras (F235): sc-29

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.

CHROMOSOMAL LOCATION

Genetic locus: HRAS (human) mapping to 11p15.5; Hras1 (mouse) mapping to 7 F5.

SOURCE

H-Ras (F235) is a mouse monoclonal antibody raised against a recombinant H-Ras protein.

PRODUCT

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

APPLICATIONS

H-Ras (F235) is recommended for detection of H-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 H-Ras siRNA (h): sc-29340, H-Ras siRNA (m): sc-29341, H-Ras siRNA (r): sc-108004, H-Ras shRNA Plasmid (h): sc-29340-SH, H-Ras shRNA Plasmid (m): sc-29341-SH, H-Ras shRNA Plasmid (r): sc-108004-SH, H-Ras shRNA (h) Lentiviral Particles: sc-29340-V, H-Ras shRNA (m) Lentiviral Particles: sc-29341-V and H-Ras shRNA (r) Lentiviral Particles: sc-108004-V.

Molecular Weight of H-Ras: 21 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

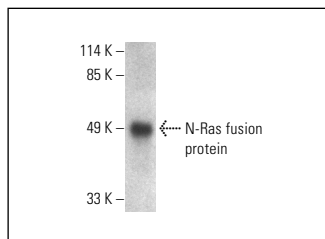
RESEARCH USE

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

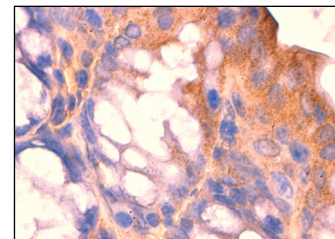
STORAGE

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

DATA



H-Ras (F235): sc-29. Western blot analysis of full length human recombinant N-Ras fusion protein.



H-Ras (F235): sc-29. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse colon tissue showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Hinoi, T., et al. 1996. Post-translational modifications of Ras and Ral are important for the action of Ral GDP dissociation stimulator. *J. Biol. Chem.* 271: 19710-19716.
- Yamaoka, T., et al. 2017. Distinct afatinib resistance mechanisms identified in lung adenocarcinoma harboring an EGFR mutation. *Mol. Cancer Res.* 15: 915-928.
- Takahashi, A., et al. 2017. Exosomes maintain cellular homeostasis by excreting harmful DNA from cells. *Nat. Commun.* 8: 15287.
- Dardaei, L., et al. 2018. SHP2 inhibition restores sensitivity in ALK-rearranged non-small-cell lung cancer resistant to ALK inhibitors. *Nat. Med.* 24: 512-517.
- Takahashi, A., et al. 2018. Downregulation of cytoplasmic DNases is implicated in cytoplasmic DNA accumulation and SASP in senescent cells. *Nat. Commun.* 9: 1249.
- Bartsch, K., et al. 2018. RNase H2 loss in murine astrocytes results in cellular defects reminiscent of nucleic acid-mediated autoinflammation. *Front. Immunol.* 9: 587.
- Zheng, Z.Y., et al. 2018. Induction of N-Ras degradation by flunarizine-mediated autophagy. *Sci. Rep.* 8: 16932.
- Liu, Z., et al. 2019. Tn antigen promotes human colorectal cancer metastasis via H-Ras mediated epithelial-mesenchymal transition activation. *J. Cell. Mol. Med.* 68: 179-184.
- Nakatani, K., et al. 2019. KRAS and EGFR amplifications mediate resistance to rociletinib and osimertinib in acquired afatinib-resistant NSCLC harboring exon 19 deletion/T790M in EGFR. *Mol. Cancer Ther.* 18: 112-126.

CONJUGATES

See **H-Ras (259): sc-35** for H-Ras antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.