

H-Ras (M3): sc-53958

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.

CHROMOSOMAL LOCATION

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

SOURCE

H-Ras (M3) is a mouse monoclonal antibody raised against recombinant H-Ras protein of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

H-Ras (M3) 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.

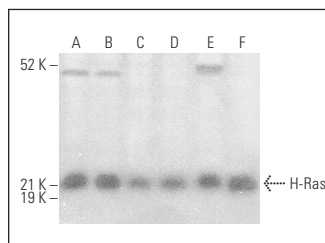
Molecular Weight of H-Ras: 21 kDa.

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

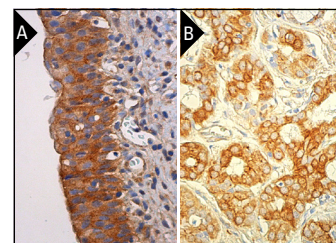
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



H-Ras (M3): sc-53958. Western blot analysis of H-Ras expression in MCF7 (A), HeLa (B), Jurkat (C), NIH/3T3 (D), KNRK (E) and A-431 (F) whole cell lysates.



H-Ras (M3): sc-53958. Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing membrane and cytoplasmic staining of urothelial cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human salivary gland tissue showing membrane and cytoplasmic staining of glandular cells. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214. Detected with m-IgG Fc BP-B: sc-533652 and ImmunoCruz® ABC Kit: sc-516216 (B).

SELECT PRODUCT CITATIONS

- DeAngelis, J.T., et al. 2011. 2D difference gel electrophoresis analysis of different time points during the course of neoplastic transformation of human mammary epithelial cells. *J. Proteome Res.* 10: 447-458.
- Pacheco-Velázquez, S.C., et al. 2019. Heart myxoma develops oncogenic and metastatic phenotype. *J. Cancer Res. Clin. Oncol.* 145: 1283-1295.
- Gao, Y., et al. 2019. Simvastatin delays castration-resistant prostate cancer metastasis and androgen receptor antagonist resistance by regulating the expression of caveolin-1. *Int. J. Oncol.* 54: 2054-2068.
- Posternak, G., et al. 2020. Functional characterization of a PROTAC directed against BRAF mutant V600E. *Nat. Chem. Biol.* 16: 1170-1178.

STORAGE

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



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.