

H-Ras (E-15): sc-68743

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, which is 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.

SOURCE

H-Ras (E-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of H-Ras of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-68743 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

H-Ras (E-15) is recommended for detection of antigenic determinants common to H-, K- and 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); may cross-react with M-Ras, TC 21 and R-Ras.

H-Ras (E-15) is also recommended for detection of antigenic determinants common to H-, K- and N-Ras p21 in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of H-Ras: 21 kDa.

Positive Controls: H-Ras (m): 293T Lysate: sc-126931, HeLa whole cell lysate: sc-2200 or KNRK whole cell lysate: sc-2214.

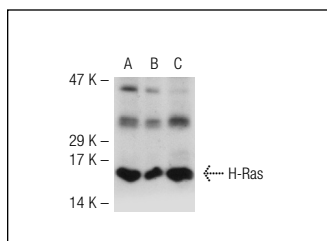
STORAGE

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

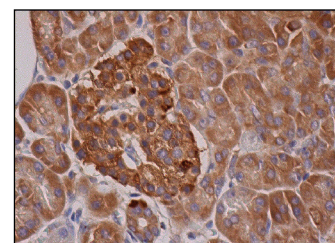
RESEARCH USE

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

DATA



H-Ras (E-15): sc-68743. Western blot analysis of H-Ras expression in non-transfected 293T: sc-117752 (A), mouse H-Ras transfected 293T: sc-126931 (B) and HeLa (C) whole cell lysates.



H-Ras (E-15): sc-68743. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of exocrine glandular cells and Islets of Langerhans.

SELECT PRODUCT CITATIONS

- Quintanar-Audelo, M., et al. 2011. Sprouty-related Ena/vasodilator-stimulated phosphoprotein homology 1-domain-containing protein (SPRED1), a tyrosine-protein phosphatase non-receptor type 11 (SHP2) substrate in the Ras/extracellular signal-regulated kinase (ERK) pathway. *J. Biol. Chem.* 286: 23102-23112.
- Hong, J., et al. 2011. Phosphorylation of serine 68 of Twist1 by MAPKs stabilizes Twist1 protein and promotes breast cancer cell invasiveness. *Cancer Res.* 71: 3980-3990.
- Ferreira, J.P., et al. 2012. Quantitative assessment of Ras over-expression via shotgun deployment of vectors utilizing synthetic promoters. *Integr. Biol.* 4: 108-114.
- Ju, H.L., et al. 2013. Investigation of oncogenic cooperation in simple liver-specific transgenic mouse models using noninvasive *in vivo* imaging. *PLoS ONE* 8: e59869.
- Ferreira, J.P. and Wang, C.L. 2013. Optimization of oncogene expression through intra-population competition. *Biotechnol. J.* 8: 1476-1484.

PROTOCOLS

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



Try **H-Ras (259): sc-35** or **H-Ras (M3): sc-53958**, our highly recommended monoclonal alternatives to H-Ras (E-15). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **H-Ras (259): sc-35**.