

E-Ras (H-48): sc-134860

BACKGROUND

The Ras-encoded family of proteins bind to GDP and to GTP with high affinity. They possess a low level of intrinsic GTPase activity that can be stimulated more than 100-fold by interaction with cytosolic GTPase activating protein (GAP). Ras family members include H-Ras, K-Ras, N-Ras, M-Ras, R-Ras, E-Ras, Rheb, TC 21, RASL11B and Rad GTPase. H-Ras and K-Ras were first identified as oncogenes of acutely transforming RNA tumor viruses. Subsequently, mutated Ras genes have been found in many human tumors, providing evidence for a common genetic target in cancer. In mammals, a variety of extracellular growth factors that act through protein tyrosine kinase receptors, such as Insulin, platelet-derived growth factor and nerve growth factor, require Ras to exert their effects. Embryonic stem cell-expressed Ras (E-Ras) is a 277 amino acid protein that localizes to the cytoplasmic membrane and shares 43%, 46% and 47% identity with H-Ras, K-Ras and N-Ras, respectively. E-Ras contains five highly conserved domains essential for small G proteins and a CAAX motif.

REFERENCES

- Miyoshi, J., Kagimoto, M., Soeda, E. and Sakaki, Y. 1984. The human c-Ha-Ras2 is a processed pseudogene inactivated by numerous base substitutions. *Nucleic Acids Res.* 12: 1821-1828.
- Bauer, P.I., Mendeleyeva, J., Kirsten, E., Comstock, J.A., Hakam, A., Buki, K.G. and Kun, E. 2002. Anticancer action of 4-iodo-3-nitrobenzamide in combination with buthionine sulfoximine: inactivation of poly(ADP-ribose) polymerase and tumor glycolysis and the appearance of a poly(ADP-ribose) polymerase protease. *Biochem. Pharmacol.* 63: 455-462.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 300437. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Takahashi, K., Mitsui, K. and Yamanaka, S. 2003. Role of E-Ras in promoting tumour-like properties in mouse embryonic stem cells. *Nature* 423: 541-545.
- Kameda, T. and Thomson, J.A. 2005. Human E-Ras gene has an upstream premature polyadenylation signal that result in a truncated, noncoding transcript. *Stem Cells* 23: 1535-1540.

CHROMOSOMAL LOCATION

Genetic locus: ERAS (human) mapping to Xp11.23; Eras (mouse) mapping to X A1.1.

SOURCE

E-Ras (H-48) is a rabbit polyclonal antibody raised against amino acids 186-233 mapping at the C-terminus of E-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.

STORAGE

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

APPLICATIONS

E-Ras (H-48) is recommended for detection of E-Ras of human and, to a lesser extent, mouse and rat 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for E-Ras siRNA (h): sc-60564, E-Ras siRNA (m): sc-60565, E-Ras shRNA Plasmid (h): sc-60564-SH, E-Ras shRNA Plasmid (m): sc-60565-SH, E-Ras shRNA (h) Lentiviral Particles: sc-60564-V and E-Ras shRNA (m) Lentiviral Particles: sc-60565-V.

Molecular Weight of E-Ras: 24 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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


 MONOS
Satisfaction
Guaranteed

Try **E-Ras (B-12): sc-393268**, our highly recommended monoclonal alternative to E-Ras (H-48).