

ERAL1 (R-16): sc-101951

BACKGROUND

In *E. coli*, Era is a GTPase that is crucial for cell cycle progression and proper cell division, playing a key role in cellular proliferation. ERAL1 (Era G-protein-like 1), also known as ERA, ERAL1A, HERA-A, HERA-B or CEGA (conserved ERA-like GTPase), is a 437 amino acid human homolog of Era. Functioning as a probable GTP-binding protein, ERAL1 contains the same structural domains as its yeast counterpart, namely a conserved BoxA sequence, a C-terminal KH domain and an N-terminal GTP-binding domain. Due to the high level of structural similarity with Era, ERAL1 may participate in cell cycle events, including cellular proliferation and cell division. ERAL1 contains one KH type-2 domain and is expressed as two isoforms, designated HERA-A and HERA-B, which are produced due to alternative splicing events.

REFERENCES

- Gollop, N. and March, P.E. 1991. A GTP-binding protein (Era) has an essential role in growth rate and cell cycle control in *Escherichia coli*. *J. Bacteriol.* 173: 2265-2270.
- Sayed, A., et al. 1999. Era, an essential *Escherichia coli* small G-protein, binds to the 30S ribosomal subunit. *Biochem. Biophys. Res. Commun.* 264: 51-54.
- Chen, X., et al. 1999. Purification, characterization and crystallization of Era, an essential GTPase from *Escherichia coli*. *FEBS Lett.* 445: 425-430.
- Zhao, G., et al. 1999. Biochemical and molecular analyses of the C-terminal domain of Era GTPase from *Streptococcus pneumoniae*. *Microbiology* 145: 791-800.
- Britton, R.A., et al. 2000. Isolation and preliminary characterization of the human and mouse homologues of the bacterial cell cycle gene Era. *Genomics* 67: 78-82.
- Meier, T.I., et al. 2000. Era GTPase of *Escherichia coli*: binding to 16S rRNA and modulation of GTPase activity by RNA and carbohydrates. *Microbiology* 146: 1071-1083.
- Akiyama, T., et al. 2001. Mammalian homologue of *E. coli* Ras-like GTPase (Era) is a possible apoptosis regulator with RNA binding activity. *Genes Cells* 6: 987-1001.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607435. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: ERAL1 (human) mapping to 17q11.2.

STORAGE

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

PROTOCOLS

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

SOURCE

ERAL1 (R-16) is a purified rabbit polyclonal antibody raised against ERAL1 of human origin.

PRODUCT

Each vial contains 50 µg IgG in 500 µl PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

ERAL1 (R-16) is recommended for detection of ERAL1 of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ERAL1 siRNA (h): sc-94130, ERAL1 shRNA Plasmid (h): sc-94130-SH and ERAL1 shRNA (h) Lentiviral Particles: sc-94130-V.

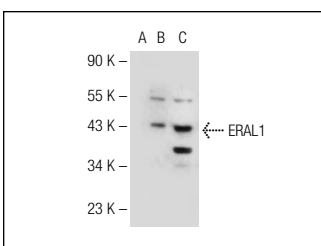
Molecular Weight of ERAL1: 48 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, ERAL1 (h2): 293T Lysate: sc-171759 or Jurkat whole cell lysate: sc-2204.

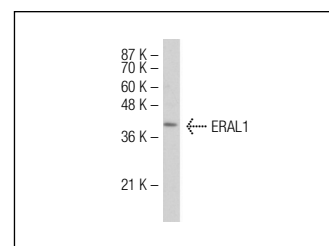
RECOMMENDED SECONDARY REAGENTS

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).

DATA



ERAL1 (R-16): sc-101951. Western blot analysis of ERAL1 expression in non-transfected 293T: sc-17752 (A), human ERAL1 transfected 293T: sc-171759 (B) and HeLa (C) whole cell lysates.



ERAL1 (R-16): sc-101951. Western blot analysis of ERAL1 expression in Jurkat whole cell lysate.

RESEARCH USE

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