SANTA CRUZ BIOTECHNOLOGY, INC.

EF-2 (P-19): sc-13003

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Two elongation factors (EF) EF-Tu and EF-2 participate in the elongation phase during protein biosynthesis on the ribosome and their functional cycles depend on GTP binding and its hydrolysis. EF-Tu (also designated mitochondrial precursor p43) and EF-2 are multidomain GTPases with essential functions in translation, and they both bind to the same site on the ribosome where their low intrinsic GTPase activities are strongly stimulated. EF-Tu plays a central role in the fast and accurate delivery of aminoacyl-tRNAs to the translating ribosome. In addition, EF-Tu protects the aminoester bond against hydrolysis until a correct match between the codon on mRNA and the anticodon on tRNA can be achieved. EF-2 supports the translocation of tRNAs and of mRNAs on the ribosome so that a new codon can be exposed for decoding.

CHROMOSOMAL LOCATION

Genetic locus: EEF2 (human) mapping to 19p13.3; Eef2 (mouse) mapping to 10 C1.

SOURCE

EF-2 (P-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of EF-2 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-13003 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

EF-2 (P-19) is recommended for detection of EF-2 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

EF-2 (P-19) is also recommended for detection of EF-2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for EF-2 siRNA (h): sc-43541, EF-2 siRNA (m): sc-43542, EF-2 shRNA Plasmid (h): sc-43541-SH, EF-2 shRNA Plasmid (m): sc-43542-SH, EF-2 shRNA (h) Lentiviral Particles: sc-43541-V and EF-2 shRNA (m) Lentiviral Particles: sc-43542-V.

Molecular Weight of EF-2: 92.5 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HL-60 whole cell lysate: sc-2209 or NIH/3T3 whole cell lysate: sc-2210.

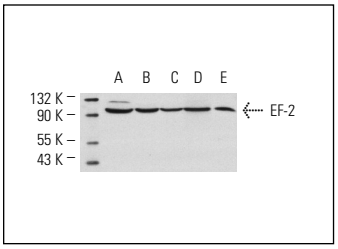
STORAGE

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

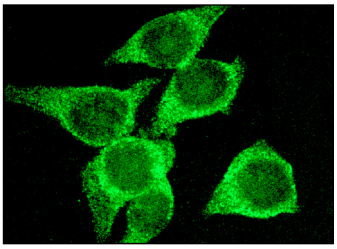
RESEARCH USE

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

DATA



EF-2 (P-19): sc-13003. Western blot analysis of EF-2 expression in HeLa (**A**), HL-60 (**B**), NIH/3T3 (**C**) and PC-12 (**D**) whole cell lysates and rat liver (**E**) extract.



EF-2 (P-19): sc-13003. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. Roepstorff, C., et al. 2005. Regulation of oxidative enzyme activity and eukaryotic elongation factor 2 in human skeletal muscle: influence of gender and exercise. Acta Physiol. Scand. 184: 215-224.
2. Rose, A.J., et al. 2005. Exercise rapidly increases eukaryotic elongation factor 2 phosphorylation in skeletal muscle of men. J. Physiol. 569: 223-228.
3. Sanz, M.A., et al. 2009. Dual mechanism for the translation of subgenomic mRNA from Sindbis virus in infected and uninfected cells. PLoS ONE 4: e4772.
4. Rufino-Palomares, E., et al. 2011. Proteomics in the liver of gilthead sea bream *(Sparus aurata)* to elucidate the cellular response induced by the intake of maslinic acid. Proteomics 11: 3312-3325.
5. Garcia-Moreno, M., et al. 2013. Requirements for eIF4A and eIF2 during translation of Sindbis virus subgenomic mRNA in vertebrate and invertebrate host cells. Cell. Microbiol. 15: 823-840.

PROTOCOLS

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