SANTA CRUZ BIOTECHNOLOGY, INC.

EF-2 (H-118): sc-25634

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 (H-118) is a rabbit polyclonal antibody raised against amino acids 741-858 mapping at 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.

APPLICATIONS

EF-2 (H-118) 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), 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).

EF-2 (H-118) 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: 93 kDa.

Positive Controls: rat ovary extract: sc-2399, HeLa whole cell lysate: sc-2200 or HL-60 whole cell lysate: sc-2209.

RESEARCH USE

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

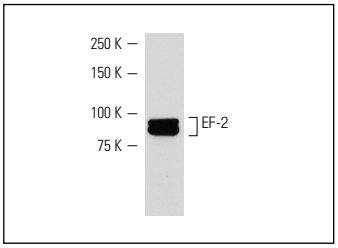
PROTOCOLS

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

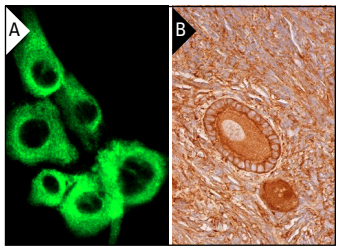
STORAGE

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

DATA



EF-2 (H-118): sc-25634. Western blot analysis of EF-2 expression in rat ovary tissue extract.



EF-2 (H-118): sc-25634. Immunofluorescence staining of methanol-fixed BC_3H1 cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human ovary tissue showing cytoplasmic and membrane staining of follicle cells and ovarian stroma cells (**B**).

SELECT PRODUCT CITATIONS

1. Giraud, M.N., et al. 2005. Expressional reprogramming of survival pathways in rat cardiocytes by neuregulin-1β. J. Appl. Physiol. 99: 313-322.
2. Giannakopoulos, N.V., et al. 2005. Proteomic identification of proteins conjugated to ISG15 in mouse and human cells. Biochem. Biophys. Res. Commun. 336: 496-506.
3. Yang, C., et al. 2011. Apical Na^+-D-glucose cotransporter 1 (SGLT1) activity and protein abundance are expressed along the jejunal crypt-villus axis in the neonatal pig. Am. J. Physiol. Gastrointest. Liver Physiol. 300: G60-G70.
4. Irino, T., et al. 2011. JAK2 V617F-dependent upregulation of PU.1 expression in the peripheral blood of myeloproliferative neoplasm patients. PLoS ONE 6: e22148.
5. Bellé, R., et al. 2011. Identification of a new isoform of eEF2 whose phosphorylation is required for completion of cell division in sea urchin embryos. Dev. Biol. 350: 476-483.
6. Liu, S., et al. 2012. Diphthamide modification on eukaryotic elongation factor 2 is needed to assure fidelity of mRNA translation and mouse development. Proc. Natl. Acad. Sci. USA 109: 13817-13822.
7. Jiang, N., et al. 2015. 60S ribosomal protein L35 regulates β-casein translational elongation and secretion in bovine mammary epithelial cells. Arch. Biochem. Biophys. 583: 130-139.