

EF-2 (C-9): sc-166415

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 (C-9) is a mouse monoclonal antibody raised against amino acids 741-858 mapping at the C-terminus of EF-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

EF-2 (C-9) is available conjugated to agarose (sc-166415 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166415 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166415 PE), fluorescein (sc-166415 FITC), Alexa Fluor® 488 (sc-166415 AF488), Alexa Fluor® 546 (sc-166415 AF546), Alexa Fluor® 594 (sc-166415 AF594) or Alexa Fluor® 647 (sc-166415 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166415 AF680) or Alexa Fluor® 790 (sc-166415 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

EF-2 (C-9) is recommended for detection of EF-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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.

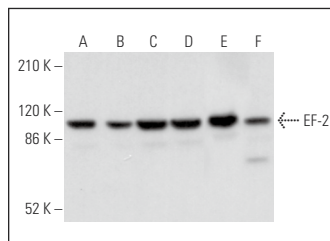
Molecular Weight of EF-2: 93 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or A-431 cell lysate: sc-2201.

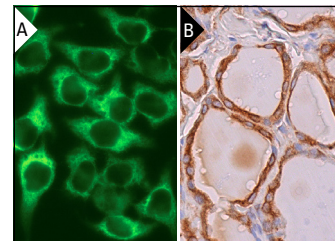
STORAGE

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

DATA



EF-2 (C-9): sc-166415. Western blot analysis of EF-2 expression in NIH/3T3 (A), PC-12 (B), A-431 (C), Jurkat (D) and HeLa (E) whole cell lysates and rat liver tissue extract (F).



EF-2 (C-9): sc-166415. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid gland tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

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- Hwang, J.S., et al. 2022. Regulation of TGF-β1-induced EMT by autophagy-dependent energy metabolism in cancer cells. *Cancers* 14: 4845.
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- Razzoli, M., et al. 2024. A key role for P2RX5 in brown adipocyte differentiation and energy homeostasis. *Adipocyte* 13: 2421745.
- Bhat, F.A., et al. 2024. Exploration of nitrotyrosine-containing proteins and peptides by antibody-based enrichment strategies. *Mol. Cell. Proteomics* 23: 100733.

RESEARCH USE

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