

EF-1 α 1/2 (H-300): sc-28578

BACKGROUND

The elongation factor-1 complex is composed of two subunits, EF-1 α 1 (elongation factor 1- α 1) and EF-1 α 2 (elongation factor 1- α 2), and is responsible for the delivery of aminoacyl tRNAs to the ribosome. EF-1 α 1 is expressed predominately in brain, placenta, lung, liver, kidney and pancreas, while EF-1 α 2 is highly expressed in heart, brain and skeletal muscle. Both EF-1 α 1 and α 2 localize to the nucleus and belong to the GTP-binding elongation factor family. The gene encoding EF-1 α 2, which maps to human chromosome 20q13.33, may play a role in the development of ovarian cancer, while the EF-1 α 1 gene, mapping to chromosome 6q13, is commonly present as an autoantigen in patients with Felty syndrome. Felty syndrome is a disorder characterized by rheumatoid arthritis, a swollen spleen, decreased white blood cell count, and increased susceptibility to infection.

REFERENCES

- Brands, J.H., et al. 1986. The primary structure of the alpha subunit of human elongation factor 1. Structural aspects of guanine-nucleotide-binding sites. *Eur. J. Biochem.* 155: 167-171.
- Uetsuki, T., et al. 1989. Isolation and characterization of the human chromosomal gene for polypeptide chain elongation factor-1 α . *J. Biol. Chem.* 264: 5791-5798.

CHROMOSOMAL LOCATION

Genetic locus: EEF1A1 (human) mapping to 6q13, EEF1A2 (human) mapping to 20q13.33; Eef1a1 (mouse) mapping to 9 E1, Eef1a2 (mouse) mapping to 2 H4.

SOURCE

EF-1 α 1/2 (H-300) is a rabbit polyclonal antibody raised against amino acids 163-462 mapping at the C-terminus of EF-1 α 1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

EF-1 α 1/2 (H-300) is recommended for detection of EF-1 α 1 and EF-1 α 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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-1 α 1/2 (H-300) is also recommended for detection of EF-1 α 1 and EF-1 α 2 in additional species, including equine, canine, bovine, porcine and avian.

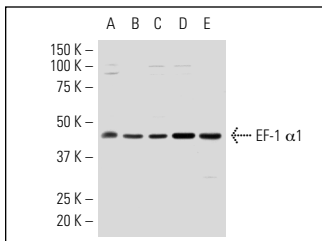
Molecular Weight of EF-1 α 1/2: 50 kDa.

Positive Controls: A549 cell lysate: sc-2413, Hep G2 cell lysate: sc-2227 or HeLa whole cell lysate: sc-2200.

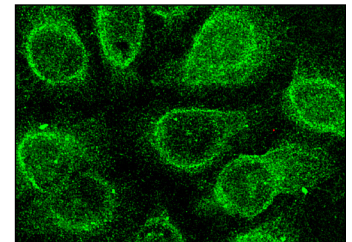
RECOMMENDED SECONDARY REAGENTS

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.

DATA



EF-1 α 1 (H-300): sc-28578. Western blot analysis of EF-1 α expression in HeLa (A), MOLT-4 (B), A549 (C), JAR (D) and Hep G2 (E) whole cell lysates.



EF-1 α 1 (H-300): sc-28578. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Miura, P., et al. 2010. The utrophin A 5'-UTR drives cap-independent translation exclusively in skeletal muscles of transgenic mice and interacts with eEF1A2. *Hum. Mol. Genet.* 19: 1211-1220.
- Piazzini, M., et al. 2010. eEF1A phosphorylation in the nucleus of Insulin-stimulated C2C12 myoblasts: Ser53 is a novel substrate for protein kinase C β . *Mol. Cell. Proteomics* 9: 2719-2728.
- Zhang, F., et al. 2012. Astrocyte elevated gene-1 interacts with β -catenin and increases migration and invasion of colorectal carcinoma. *Mol. Carcinog.* E-published.

STORAGE

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



Try **EF-1 α 1 (CBP-KK1): sc-21758** or **EF-1 α 1/2 (G-8): sc-377439**, our highly recommended monoclonal alternatives to EF-1 α 1/2 (H-300). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **EF-1 α 1 (CBP-KK1): sc-21758**.