

EF-1 δ (D-17): sc-68483

BACKGROUND

EF-1 (elongation factor-1) is a multi-protein complex that is comprised of α , β , γ and δ subunits, all of which work together to ensure the delivery of amino-acyl-tRNAs to the ribosome, thereby elongating mRNA. EF-1 δ , also known as EEF1D, is a 281 amino acid subunit of the EF-1 complex. Functioning as a guanine nucleotide exchange factor, EF-1 δ stimulates the exchange of EF-1 α -bound GDP for GTP. Additionally, EF-1 δ is thought to interact with HIV-1 Tat and may repress host-cell mRNA transcription. Overexpression of EF-1 δ is associated with oesophageal carcinoma and may adversely affect the outcome of medulloblastomas, suggesting that the role that EF-1 δ plays in transcriptional elongation is important for the tight control and regulation of the cell cycle. Multiple isoforms of EF-1 δ exist due to alternative splicing events.

REFERENCES

1. Kawaguchi, Y., et al. 2003. Conserved protein kinases encoded by herpesviruses and cellular protein kinase Cdc2 target the same phosphorylation site in eukaryotic elongation factor-1 δ . *J. Virol.* 77: 2359-2368.
2. Cans, C., et al. 2003. Translationally controlled tumor protein acts as a guanine nucleotide dissociation inhibitor on the translation elongation factor eEF1A. *Proc. Natl. Acad. Sci. USA* 100: 13892-13897.
3. Kapp, L.D., et al. 2004. The molecular mechanics of eukaryotic translation. *Annu. Rev. Biochem.* 73: 657-704.
4. Ogawa, K., et al. 2004. Clinical significance of elongation factor-1 δ mRNA expression in oesophageal carcinoma. *Br. J. Cancer* 91: 282-286.
5. Brandenberger, R., et al. 2004. Transcriptome characterization elucidates signaling networks that control human ES cell growth and differentiation. *Nat. Biotechnol.* 22: 707-716.
6. De Bortoli, M., et al. 2006. Medulloblastoma outcome is adversely associated with overexpression of EEF1D, RPL30, and RPS20 on the long arm of chromosome 8. *BMC Cancer* 6: 223.
7. Beranova-Giorgianni, S., et al. 2006. Phosphoproteomic analysis of the human pituitary. *Pituitary* 9: 109-120.

CHROMOSOMAL LOCATION

Genetic locus: EEF1D (human) mapping to 8q24.3; Eef1d (mouse) mapping to 15 D3.

SOURCE

EF-1 δ (D-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of EF-1 δ of human origin.

RESEARCH USE

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

STORAGE

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

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-68483 X, 200 μ g/0.1 ml.

Blocking peptide available for competition studies, sc-68483 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

EF-1 δ (D-17) is recommended for detection of EF-1- δ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 δ (D-17) is also recommended for detection of EF-1- δ in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for EF-1 δ siRNA (h): sc-77235, EF-1 δ siRNA (m): sc-77237, EF-1 δ shRNA Plasmid (h): sc-77235-SH, EF-1 δ shRNA Plasmid (m): sc-77237-SH, EF-1 δ shRNA (h) Lentiviral Particles: sc-77235-V and EF-1 δ shRNA (m) Lentiviral Particles: sc-77237-V.

EF-1 δ (D-17) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of EF-1 δ : 31 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Di Paola, D., et al. 2010. Increased origin activity in transformed versus normal cells: identification of novel protein players involved in DNA replication and cellular transformation. *Nucleic Acids Res.* 38: 2314-2331.

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Try **EF-1 δ (A-5): sc-393731** or **EF-1 δ (3J6): sc-130371**, our highly recommended monoclonal alternatives to EF-1 δ (D-17).