

Edc3 (T-19): sc-55083

BACKGROUND

The major eukaryotic mRNA decay pathway occurs through deadenylation, decapping, and 5' to 3' degradation of the mRNA. Decapping is a critical control point in this decay pathway. During the process of mRNA degradation, Edc3 has been found to play a role in mRNA decapping. As part of the mRNA degradation process, Edc3 becomes part of a complex that also contains hDcp1a, hDcp2a, RCK and Edc4/HEDLS. Within this complex, Edc3 directly interacts with Dcp1a and DDX6. Edc3, enhancer of mRNA-decapping protein 3, is a 508 amino acid protein that maps to human gene EDC3. Edc3 is a member of the Edc3 family and contains one YjeF N-terminal domain. Edc3 is localized to the cytoplasm and is found primarily in the cells' processing bodies (PB). Evidence indicates Edc3 also interacts with TTP, zinc finger protein 36, a candidate gene for obesity-related metabolic complications.

REFERENCES

1. Dunckley, T., et al. 2001. Two related proteins, Edc1p and Edc2p, stimulate mRNA decapping in *Saccharomyces cerevisiae*. *Genetics* 157: 27-37.
2. Schwartz, D., et al. 2003. The enhancer of decapping proteins, Edc1p and Edc2p, bind RNA and stimulate the activity of the decapping enzyme. *RNA* 9: 239-251.
3. Kshirsagar, M. and Parker, R. 2004. Identification of Edc as an enhancer of mRNA decapping in *Saccharomyces cerevisiae*. *Genetics* 166: 729-739.
4. Fenger-Grøn, M., et al. 2005. Multiple processing body factors and the ARE binding protein TTP activate mRNA decapping. *Mol. Cell* 20: 905-915.
5. Beausoleil, S.A., et al. 2006. A probability-based approach for high-throughput protein phosphorylation analysis and site localization. *Nat. Biotechnol.* 24: 1285-1292.
6. Rudolph, C., et al. 2007. ApoA-I-binding protein (AI-BP) and its homologues hYjeF-N2 and hYjeF-N3 comprise the YjeF-N domain protein family in humans with a role in spermiogenesis and oogenesis. *Horm. Metab. Res.* 39: 322-335.
7. Dong, S., et al. 2007. Yra1 autoregulation requires nuclear export and cytoplasmic Edc3p-mediated degradation of its pre-mRNA. *Mol. Cell* 25: 559-573.
8. Tritschler, F., et al. 2007. A divergent Sm-fold in Edc3 proteins mediates Dcp1-binding and P-body targeting. *Mol. Cell. Biol.* 27: 8600-8611.

CHROMOSOMAL LOCATION

Genetic locus: EDC3 (human) mapping to 15q24.1; Edc3 (mouse) mapping to 9 B.

SOURCE

Edc3 (T-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Edc3 of human origin.

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 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-55083 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Edc3 (T-19) is recommended for detection of Edc3 of mouse 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).

Edc3 (T-19) is also recommended for detection of Edc3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Edc3 siRNA (h): sc-62134, Edc3 siRNA (m): sc-62135, Edc3 shRNA Plasmid (h): sc-62134-SH, Edc3 shRNA Plasmid (m): sc-62135-SH, Edc3 shRNA (h) Lentiviral Particles: sc-62134-V and Edc3 shRNA (m) Lentiviral Particles: sc-62135-V.

Molecular Weight of Edc3: 56 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HeLa nuclear extract: sc-2120 or 3T3-L1 cell lysate: sc-2243.

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.

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.


 MONOS
 Satisfaction
 Guaranteed

Try **Edc3 (D-6): sc-365024** or **Edc3 (F-9): sc-271806**, our highly recommended monoclonal alternatives to Edc3 (T-19).