SANTA CRUZ BIOTECHNOLOGY, INC.

Edc3 (H-300): sc-135013

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The Power to Question

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

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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 (H-300) is a rabbit polyclonal antibody raised against amino acids 209-508 mapping at the C-terminus of Edc3 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

Edc3 (H-300) is recommended for detection of Edc3 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

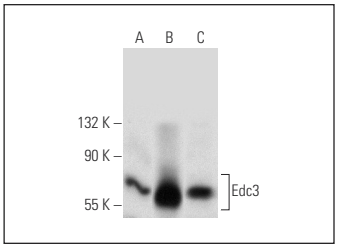
Edc3 (H-300) is also recommended for detection of Edc3 in additional species, including equine, canine, porcine and avian.

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: 3T3-L1 cell lysate: sc-2243, HeLa whole cell lysate: sc-2200 or Edc3 (h): 293 Lysate: sc-111192.

DATA



Edc3 (H-300): sc-135013. Western blot analysis of Edc3 expression in non-transfected 293: sc-110760 (**A**), human Edc3 transfected 293: sc-111192 (**B**) and 3T3-L1 (**C**) whole cell lysates.

STORAGE

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

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 (H-300).