SANTA CRUZ BIOTECHNOLOGY, INC.

Edc3 (D-6): sc-365024

SANTA CRUZ BIOTECHNOLOGY

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 processing bodies (PBs) of the cell. Evidence indicates Edc3 also interacts with TTP (zinc finger protein 36), a candidate gene for obesity-related metabolic complications.

CHROMOSOMAL LOCATION

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

SOURCE

Edc3 (D-6) is a mouse monoclonal antibody raised against amino acids 209-508 mapping at the C-terminus of Edc3 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Edc3 (D-6) is available conjugated to agarose (sc-365024 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365024 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365024 PE), fluorescein (sc-365024 FITC), Alexa Fluor® 488 (sc-365024 AF488), Alexa Fluor® 546 (sc-365024 AF546), Alexa Fluor® 594 (sc-365024 AF594) or Alexa Fluor® 647 (sc-365024 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365024 AF680) or Alexa Fluor® 790 (sc-365024 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

Edc3 (D-6) is recommended for detection of Edc3 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

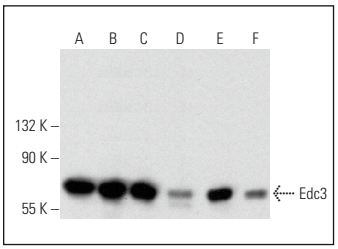
Molecular Weight of Edc3: 56 kDa.

Positive Controls: DU 145 cell lysate: sc-2268, Jurkat whole cell lysate: sc-2204 or NRK whole cell lysate: sc-364197.

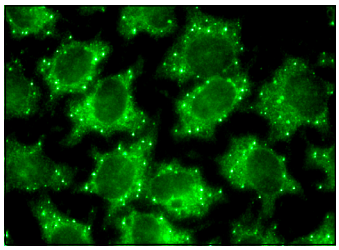
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Edc3 (D-6): sc-365024. Western blot analysis of Edc3 expression in DU 145 (**A**), Jurkat (**B**), KARPAS-299 (**C**), C3H/10T1/2 (**D**), BYDP (**E**) and NRK (**F**) whole cell lysates.



Edc3 (D-6): sc-365024. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and mRNA processing body (p-body) localization.

SELECT PRODUCT CITATIONS

1. Roy, N., et al. 2021. mRNP granule proteins Fmrp and Dcp1a differentially regulate mRNP complexes to contribute to control of muscle stem cell quiescence and activation. Skelet. Muscle 11: 18.
2. Pecori, F., et al. 2021. Site-specific O-GlcNAcylation of Psme3 maintains mouse stem cell pluripotency by impairing P-body homeostasis. Cell Rep. 36: 109361.
3. Bearss, J.J., et al. 2021. Edc3 phosphorylation regulates growth and invasion through controlling P-body formation and dynamics. EMBO Rep. 22: e50835.

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 for detailed protocols and support products.