

# Edc4 (F-1): sc-374211

## 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. Edc4 (enhancer of mRNA decapping 4), also known as human enhancer of decapping large subunit (HEDLS), RCD-8 or Ge-1, is a 1,401 amino acid protein belonging to the WD repeat Edc4 family that is involved in mRNA decapping during mRNA degradation. As part of the mRNA degradation process, Edc4 becomes part of a complex that also contains hDcp1a, hDcp2a, RCK and Edc3. Localizing to P-body and cytoplasm, Edc4 contains a nuclear localization sequence (NLS) which enables it to selectively enter the nucleus as well. Edc4 becomes phosphorylated upon DNA damage and exists as two alternatively spliced isoforms that are encoded by a gene that maps to human chromosome 16q22.1.

## CHROMOSOMAL LOCATION

Genetic locus: EDC4 (human) mapping to 16q22.1; Edc4 (mouse) mapping to 8 D3.

## SOURCE

Edc4 (F-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 457-491 within an internal region of Edc4 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-374211 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## STORAGE

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

## APPLICATIONS

Edc4 (F-1) is recommended for detection of Edc4 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).

Edc4 (F-1) is also recommended for detection of Edc4 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Edc4 siRNA (h): sc-93079, Edc4 siRNA (m): sc-143291, Edc4 shRNA Plasmid (h): sc-93079-SH, Edc4 shRNA Plasmid (m): sc-143291-SH, Edc4 shRNA (h) Lentiviral Particles: sc-93079-V and Edc4 shRNA (m) Lentiviral Particles: sc-143291-V.

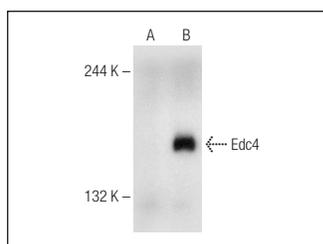
Molecular Weight of Edc4: 152 kDa.

Positive Controls: Edc4 (h): 293T Lysate: sc-116904.

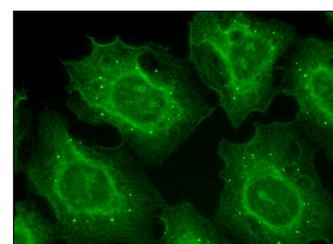
## RECOMMENDED SUPPORT REAGENTS

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



Edc4 (F-1): sc-374211. Western blot analysis of Edc4 expression in non-transfected: sc-117752 (A) and human Edc4 transfected: sc-116904 (B) 293T whole cell lysates.



Edc4 (F-1): sc-374211. Immunofluorescence staining of methanol-fixed HeLa cells showing P-bodies and cytoplasmic localization.

## SELECT PRODUCT CITATIONS

- Sonnenschein, H.A., et al. 2018. Suppressor of IKKε forms direct interactions with cytoskeletal proteins, Tubulin and α-actinin, linking innate immunity to the cytoskeleton. *FEBS Open Bio* 8: 1064-1082.
- Dhillon, P. and Durga Rao, C. 2018. Rotavirus induces formation of remodeled stress granules and P-bodies and their sequestration in viroplasm to promote progeny virus production. *J. Virol.* 92: e01363-18.
- Mikuda, N., et al. 2018. The IκB kinase complex is a regulator of mRNA stability. *EMBO J.* 37: e98658.
- Jalihal, A.P., et al. 2020. Multivalent proteins rapidly and reversibly phase-separate upon osmotic cell volume change. *Mol. Cell* 79: 978-990.e5.
- 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.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.