SANTA CRUZ BIOTECHNOLOGY, INC.

emerin (H-12): sc-25284

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Emerin is believed to be a member of the nuclear lamina associated protein family. It is ubiquitously expressed and localized to the nuclear membrane in normal cells. Mutations of the gene that encodes emerin result in the X-linked recessive disease Emery-Dreyfuss muscular dystrophy (EDMD), which is characterized by slowly progressing contractures, skeletal muscle wasting and cardiomyopathy. Research has demonstrated that the lack of emerin expression is one cause of EDMD. Emerin is involved in the association of the nuclear membrane with the lamina, and is localized specifically to desmosomes and fasciae adherentes in the heart. This may account for conduction defects in patients with EDMD.

CHROMOSOMAL LOCATION

Genetic locus: EMD (human) mapping to Xq28.

SOURCE

emerin (H-12) is a mouse monoclonal antibody raised against amino acids 3-254 of emerin of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

emerin (H-12) is available conjugated to agarose (sc-25284 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-25284 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-25284 PE), fluorescein (sc-25284 FITC), Alexa Fluor® 488 (sc-25284 AF488), Alexa Fluor® 546 (sc-25284 AF546), Alexa Fluor® 594 (sc-25284 AF594) or Alexa Fluor® 647 (sc-25284 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-25284 AF680) or Alexa Fluor® 790 (sc-25284 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

emerin (H-12) is recommended for detection of emerin of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:10,000), 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), immunohistochemistry (including paraffin-embedded sections) (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 emerin siRNA (h): sc-35296, emerin shRNA Plasmid (h): sc-35296-SH and emerin shRNA (h) Lentiviral Particles: sc-35296-V.

Molecular Weight of emerin: 37 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Saos-2 cell lysate: sc-2235 or K-562 whole cell lysate: sc-2203.

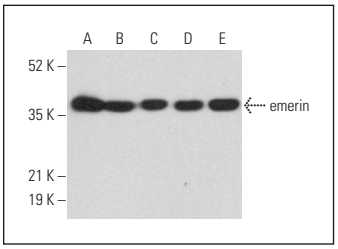
RESEARCH USE

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

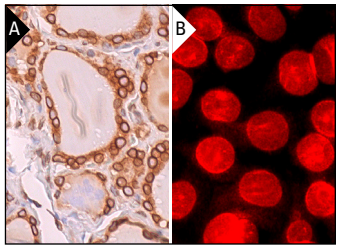
STORAGE

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

DATA



emerin (H-12): sc-25284. Western blot analysis of emerin expression in HeLa (**A**), Jurkat (**B**), K-562 (**C**), Saos-2 (**D**) and A549 (**E**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



emerin (H-12): sc-25284. Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid gland tissue showing nuclear envelope staining of glandular cells (**A**). Immunofluorescence staining of formalin-fixed HeLa cells showing nuclear envelope localization. Detection reagent used: m-IgGκ BP-CFL 555: sc-516177 (**B**).

SELECT PRODUCT CITATIONS

1. Young, K.G., et al. 2006. A BPAG1 isoform involved in cytoskeletal organization surrounding the nucleus. Exp. Cell Res. 312: 121-134.
2. Laurent, F.X., et al. 2012. New function for the RNA helicase p68/DDX5 as a modifier of MBNL1 activity on expanded CUG repeats. Nucleic Acids Res. 40: 3159-3171.
3. Yuan, J., et al. 2014. Partial deficiency of emerin caused by a splice site mutation in EMD. Intern. Med. 53: 1563-1568.
4. Kobayashi, S., et al. 2015. BAF is a cytosolic DNA sensor that leads to exogenous DNA avoiding autophagy. Proc. Natl. Acad. Sci. USA 112: 7027-7032.
5. Sonntag, E., et al. 2016. Cytomegalovirus pUL50 is the multi-interacting determinant of the core nuclear egress complex (NEC) that recruits cellular accessory NEC components. J. Gen. Virol. 97: 1676-1685.
6. Baarlink, C., et al. 2017. A transient pool of nuclear F-Actin at mitotic exit controls chromatin organization. Nat. Cell Biol. 19: 1389-1399.
7. Ranade, D., et al. 2019. Lamin A/C and emerin depletion impacts chromatin organization and dynamics in the interphase nucleus. BMC Mol. Cell Biol. 20: 11.
8. Cabukusta, B., et al. 2020. Human VAPome analysis reveals MOSPD1 and MOSPD3 as membrane contact site proteins interacting with FFAT-related FFNT motifs. Cell Rep. 33: 108475.
9. Ramirez-Martinez, A., et al. 2021. The nuclear envelope protein Net39 is essential for muscle nuclear integrity and chromatin organization. Nat. Commun. 12: 690.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.