SANTA CRUZ BIOTECHNOLOGY, INC.

emerin (FL-254): sc-15378

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-Dreifuss 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; Emd (mouse) mapping to X A7.3.

SOURCE

emerin (FL-254) is a rabbit polyclonal antibody raised against amino acids 3-254 representing full length emerin 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

emerin (FL-254) is recommended for detection of emerin 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), 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 siRNA (m): sc-35297, emerin shRNA Plasmid (h): sc-35296-SH, emerin shRNA Plasmid (m): sc-35297-SH, emerin shRNA (h) Lentiviral Particles: sc-35296-V and emerin shRNA (m) Lentiviral Particles: sc-35297-V.

Molecular Weight of emerin: 37 kDa.

Positive Controls: emerin (h): 293T Lysate: sc-128526, HeLa whole cell lysate: sc-2200 or K-562 whole cell lysate: sc-2203.

STORAGE

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

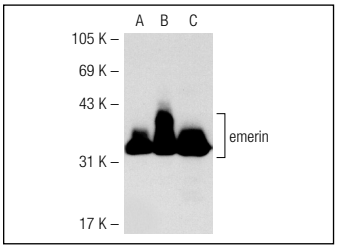
PROTOCOLS

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

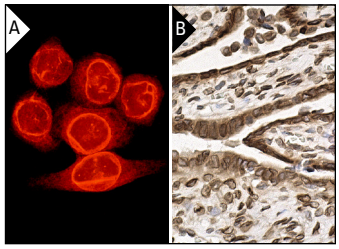
RESEARCH USE

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

DATA



emerin (FL-254): sc-15378. Western blot analysis of emerin expression in non-transfected 293T: sc-117752 (**A**), human emerin transfected 293T: sc-128526 (**B**) and K-562 (**C**) whole cell lysates.



emerin (FL-254): sc-15378. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear envelope localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing nuclear envelope and cytoplasmic staining of gladular cells (**B**).

SELECT PRODUCT CITATIONS

1. Kudlow, B.A., et al. 2005. HIV protease inhibitors block adipocyte differentiation independently of Lamin A/C. AIDS 19: 1565-1573.
2. Moulson, C.L., et al. 2005. Homozygous and compound heterozygous mutations in ZMPSTE24 cause the laminopathy restrictive dermopathy. J. Invest. Dermatol. 125: 913-919.
3. Montes de Oca, R., et al. 2009. Barrier-to-autointegration factor proteome reveals chromatin-regulatory partners. PLoS ONE 4: e7050.
4. Tifft, K.E., et al. 2009. Tyrosine phosphorylation of nuclear-membrane protein emerin by Src, Abl and other kinases. J. Cell Sci. 122: 3780-3790.
5. Butin-Israeli, V., et al. 2010. Simian virus 40 infection triggers balanced network that includes apoptotic, survival and stress pathways. J. Virol. 84: 3431-3442.
6. Moiseeva, O., et al. 2011. Retinoblastoma-independent regulation of cell proliferation and senescence by the p53-p21 axis in lamin A/C-depleted cells. Aging Cell 10: 789-797.
7. Villarreal-Silva, M., et al. 2011. Knockdown of dystrophin Dp71 impairs PC12 cells cycle: localization in the spindle and cytokinesis structures implies a role for Dp71 in cell division. PLoS ONE 6: e23504.
8. Gruenbaum-Cohen, Y., et al. 2012. The actin regulator N-WASp is required for muscle-cell fusion in mice. Proc. Natl. Acad. Sci. USA 109: 11211-11216.