

Derlin-2/3 (FL-239): sc-134847

BACKGROUND

Degradation in endoplasmic reticulum proteins, also designated Derlins or DERtrins, are crucial for the degradation of misfolded endoplasmic reticulum (ER) luminal proteins. Derlin proteins are multi-pass membrane proteins localizing to the ER. Derlins are involved in transferring misfolded proteins from the ER to the cytosol, where the misfolded proteins are destroyed in an ubiquitin-dependent manner by the proteasome. In the case of cytomegalovirus infection, Derlin-1, as opposed to Derlins-2 and -3, is involved in the export of MHC class I heavy chains from the ER via its interaction with the viral protein US11. Derlins may also be important for cell proliferation. They are widely expressed, but highest levels are primarily detected in spleen, pancreas, lung, liver, thymus and ovary. Derlin-2 is overexpressed in hepatocarcinomas.

REFERENCES

1. Ying, H., et al. 2001. Cloning and characterization of F-LANA, upregulated in human liver cancer. *Biochem. Biophys. Res. Commun.* 286: 394-400.
2. Lilley, B.N. and Ploegh, H.L. 2004. A membrane protein required for dislocation of misfolded proteins from the ER. *Nature* 429: 834-840.
3. Ye, Y., et al. 2004. A membrane protein complex mediates retro-translocation from the ER lumen into the cytosol. *Nature* 429: 841-847.
4. Katiyar, S., et al. 2005. The retrotranslocation protein Derlin-1 binds peptide:N-glycanase to the endoplasmic reticulum. *Mol. Biol. Cell* 16: 4584-4594.
5. Lilley, B.N. and Ploegh, H.L. 2005. Multiprotein complexes that link dislocation, ubiquitination and extraction of misfolded proteins from the endoplasmic reticulum membrane. *Proc. Natl. Acad. Sci. USA* 102: 14296-14301.
6. Oda, Y., et al. 2006. Derlin-2 and Derlin-3 are regulated by the mammalian unfolded protein response and are required for ER-associated degradation. *J. Cell Biol.* 172: 383-393.
7. Loureiro, J., et al. 2006. Signal peptide peptidase is required for dislocation from the endoplasmic reticulum. *Nature* 441: 894-897.

CHROMOSOMAL LOCATION

Genetic locus: DERL2 (human) mapping to 17p13.2, DERL3 (human) mapping to 22q11.23; Derl2 (mouse) mapping to 11 B4, Derl3 (mouse) mapping to 10 C1.

SOURCE

Derlin-2/3 (FL-239) is a rabbit polyclonal antibody raised against amino acids 1-239 representing full length Derlin-2 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.

STORAGE

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

APPLICATIONS

Derlin-2/3 (FL-239) is recommended for detection of Derlin-2 and Derlin-3 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).

Derlin-2/3 (FL-239) is also recommended for detection of Derlin-2 and Derlin-3 in additional species, including equine, canine and bovine.

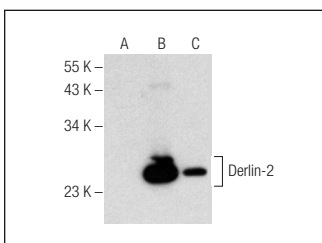
Molecular Weight of Derlin-2/3: 21 kDa.

Positive Controls: Derlin-2 (m): 293T Lysate: sc-125238, Derlin-2 (h): 293T Lysate: sc-371379 or MDA-MB-231 cell lysate: sc-2232.

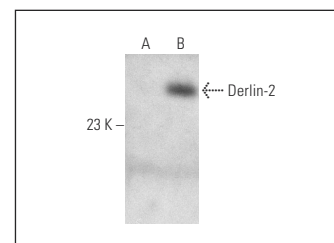
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Derlin-2/3 (FL-239): sc-134847. Western blot analysis of Derlin-2 expression in non-transfected 293T: sc-117752 (A), mouse Derlin-2 transfected 293T: sc-125238 (B) and MDA-MB-231 (C) whole cell lysates.



Derlin-2/3 (FL-239): sc-134847. Western blot analysis of Derlin-2 expression in non-transfected: sc-117752 (A) and human Derlin-2 transfected: sc-371379 (B) 293T whole cell lysates.

RESEARCH USE

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



Try **Derlin-2 (D-10): sc-398573** or **Derlin-2/3 (A-6): sc-390289**, our highly recommended monoclonal alternatives to Derlin-2/3 (FL-239).