

Derlin-3 (P-13): sc-50828

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 multipass 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 a 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 retrotranslocation 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.
8. SWISS-PROT/TrEMBL (Q9GZP9). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>

CHROMOSOMAL LOCATION

Genetic locus: DERL3 (human) mapping to 22q11.23; Derl3 (mouse) mapping to 10 C1.

SOURCE

Derlin-3 (P-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Derlin-3 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.

Blocking peptide available for competition studies, sc-50828 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Derlin-3 (P-13) is recommended for detection of Derlin-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with isoform 4.

Derlin-3 (P-13) is also recommended for detection of Derlin-3 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Derlin-3 siRNA (h): sc-60523, Derlin-3 siRNA (m): sc-60524, Derlin-3 shRNA Plasmid (h): sc-60523-SH, Derlin-3 shRNA Plasmid (m): sc-60524-SH, Derlin-3 shRNA (h) Lentiviral Particles: sc-60523-V and Derlin-3 shRNA (m) Lentiviral Particles: sc-60524-V.

Molecular Weight of Derlin-3: 27 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.

MONOS
Satisfaction
Guaranteed

Try **Derlin-2/3 (A-6): sc-390289**, our highly recommended monoclonal alternative to Derlin-3 (P-13).