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DERL1 Antibody (C-term) Blocking Peptide

Synthetic peptide
Catalog # BP8745b

Specification

DERL1 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession Q9BUN8

DERL1 Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 79139

Other Names
Derlin-1, Degradation in endoplasmic reticulum protein 1, DERtrin-1, Der1-like protein 1, DERL1, DER1

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP8745b was selected from the C-term region of human DERL1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

DERL1 Antibody (C-term) Blocking Peptide - Protein Information

Name DERL1 (HGNC:28454)

Synonyms DER1

Function
Functional component of endoplasmic reticulum-associated degradation (ERAD) for misfolded lumenal proteins (PubMed:15215856, PubMed:33658201). Forms homotetramers which encircle a large channel traversing the endoplasmic reticulum (ER) membrane (PubMed:33658201). This allows the retrotranslocation of misfolded proteins from the ER into the cytosol where they are ubiquitinated and degraded by the proteasome (PubMed:33658201). The channel

has a lateral gate within the membrane which provides direct access to membrane proteins with no need to reenter the ER lumen first (PubMed:33658201). May mediate the interaction between VCP and the misfolded protein (PubMed:15215856). Also involved in endoplasmic reticulum stress-induced pre-emptive quality control, a mechanism that selectively attenuates the translocation of newly synthesized proteins into the endoplasmic reticulum and reroutes them to the cytosol for proteasomal degradation (PubMed:26565908). By controlling the steady-state expression of the IGF1R receptor, indirectly regulates the insulin-like growth factor receptor signaling pathway (PubMed:26692333).

Cellular Location
Endoplasmic reticulum membrane; Multi-pass membrane protein

Tissue Location
Ubiquitous.

DERL1 Antibody (C-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

DERL1 Antibody (C-term) Blocking Peptide - Images

DERL1 Antibody (C-term) Blocking Peptide - Background

Functional component of endoplasmic reticulum-associated degradation (ERAD) for misfolded lumenal proteins. DERL1 may act by forming a channel that allows the retrotranslocation of misfolded proteins into the cytosol where they are ubiquitinated and degraded by the proteasome. It may mediate the interaction between VCP and the degradation substrate. In case of infection by cytomegaloviruses, it plays a central role in the export from the ER and subsequent degradation of MHC class I heavy chains via its interaction with US11 viral protein, which recognizes and associates with MHC class I heavy chains. Also participates in the degradation process of misfolded cytomegalovirus US2 protein.

DERL1 Antibody (C-term) Blocking Peptide - References

Oda Y., et.al., J. Cell Biol. 172:383-393(2006).Ye Y., et.al., Proc. Natl. Acad. Sci. U.S.A. 102:14132-14138(2005).