10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

DERL1 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8745b

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	Q9BUN8
Other Accession	Q99J56, Q71SS4
Reactivity	Human, Mouse
Predicted	Bovine, Rat, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB22770
Calculated MW	28801
Antigen Region	224-251

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	This DERL1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 224-251 amino acids from the C-terminal region of human DERL1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	DERL1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

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.

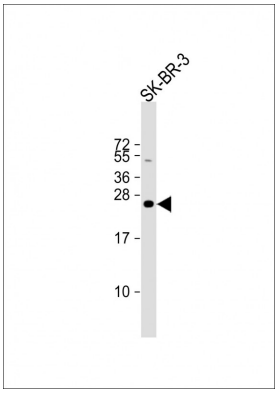
Background

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.

References

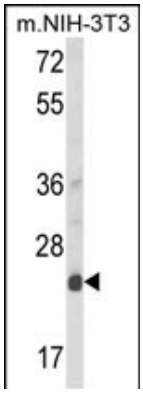
Oda Y., et.al., J. Cell Biol. 172:383-393(2006). Ye Y., et.al., Proc. Natl. Acad. Sci. U.S.A. 102:14132-14138(2005).

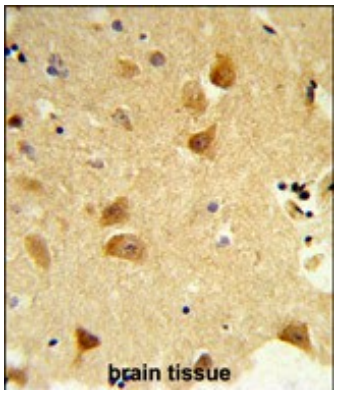
Images



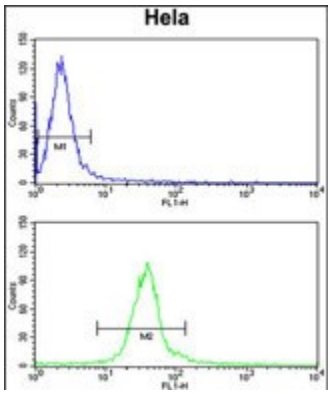
Anti-DERL1 Antibody (C-term) at 1:16000 dilution + SK-BR-3 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 29 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Western blot analysis of DERL1 Antibody (C-term) (Cat. #AP8745b) in mouse NIH-3T3 cell line lysates (35ug/lane). DERL1 (arrow) was detected using the purified Pab.





Formalin-fixed and paraffin-embedded human brain tissue reacted with DERL1 Antibody (C-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



DERL1 Antibody (C-term) (Cat.#AP8745b) flow cytometry analysis of Hela cells (bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.