

NFE2L1 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP10927B

Product Information

Application	WB, E
Primary Accession	Q14494
Other Accession	A5D7E9 , NP_003195.1
Reactivity	Human, Mouse
Predicted	Bovine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB27999
Calculated MW	84704
Antigen Region	709-738

Additional Information

Gene ID	4779
Other Names	Nuclear factor erythroid 2-related factor 1, NF-E2-related factor 1, NFE2-related factor 1, Locus control region-factor 1, Nuclear factor, erythroid derived 2, like 1, Transcription factor 11, TCF-11, Transcription factor HBZ17, Transcription factor LCR-F1, NFE2L1, HBZ17, NRF1, TCF11
Target/Specificity	This NFE2L1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 709-738 amino acids from the C-terminal region of human NFE2L1.
Dilution	WB~~1:1000 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	NFE2L1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NFE2L1
-------------	--------

Function	[Endoplasmic reticulum membrane sensor NFE2L1]: Endoplasmic reticulum membrane sensor that translocates into the nucleus in response to various stresses to act as a transcription factor (PubMed:20932482, PubMed:24448410). Constitutes a precursor of the transcription factor NRF1 (By similarity). Able to detect various cellular stresses, such as cholesterol excess, oxidative stress or proteasome inhibition (PubMed:20932482). In response to stress, it is released from the endoplasmic reticulum membrane following cleavage by the protease DDI2 and translocates into the nucleus to form the transcription factor NRF1 (By similarity). Acts as a key sensor of cholesterol excess: in excess cholesterol conditions, the endoplasmic reticulum membrane form of the protein directly binds cholesterol via its CRAC motif, preventing cleavage and release of the transcription factor NRF1, thereby allowing expression of genes promoting cholesterol removal, such as CD36 (By similarity). Involved in proteasome homeostasis: in response to proteasome inhibition, it is released from the endoplasmic reticulum membrane, translocates to the nucleus and activates expression of genes encoding proteasome subunits (PubMed:20932482).
Cellular Location	[Endoplasmic reticulum membrane sensor NFE2L1]: Endoplasmic reticulum membrane; Single-pass type II membrane protein. Endoplasmic reticulum membrane; Single-pass type III membrane protein. Note=In normal conditions, probably has a single-pass type II membrane protein topology, with the DNA-binding domain facing the endoplasmic reticulum lumen (PubMed:24448410). Following cellular stress, it is rapidly and efficiently retrotranslocated to the cytosolic side of the membrane, a process dependent on p97/VCP, to have a single-pass type III membrane protein topology with the major part of the protein facing the cytosol (PubMed:24448410). Retrotranslocated proteins are normally rapidly degraded by the proteasome and active species do not accumulate (PubMed:24448410). However, retrotranslocated protein NFE2L1 escapes degradation and is cleaved at Leu-104 by DDI2, releasing the protein from the endoplasmic reticulum membrane and forming the transcription factor NRF1 that translocates into the nucleus (PubMed:24448410)

Background

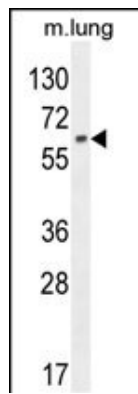
This gene encodes a protein that is involved in globin gene expression in erythrocytes. Confusion has occurred in bibliographic databases due to the shared symbol of NRF1 for this gene, NFE2L1, and for 'nuclear respiratory factor 1' which has an official symbol of NRF1.

References

Steffen, J., et al. Mol. Cell 40(1):147-158(2010)
Radhakrishnan, S.K., et al. Mol. Cell 38(1):17-28(2010)
Wang, W., et al. J. Biol. Chem. 282(34):24670-24678(2007)
Newman, J.R., et al. Science 300(5628):2097-2101(2003)
Toki, T., et al. Oncogene 14(16):1901-1910(1997)

Images

NFE2L1 Antibody (C-term) (Cat. #AP10927b) western blot analysis in mouse lung tissue lysates (35ug/lane).This demonstrates the NFE2L1 antibody detected the NFE2L1 protein (arrow).



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