

Rabbit NFE2L2 Polyclonal Antibody | anti-NFE2L2 antibody

NFE2L2 Antibody (N-term)

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA283939	Rabbit	Human (Predicted Reactivity: Mouse, Rat)	ELISA, Western Blot

PRODUCT SYNONYMS

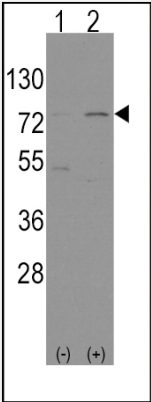
NFE2L2; Polyclonal Antibody; NFE2L2 Antibody (N-term); Nuclear factor erythroid 2-related factor 2; NF-E2-related factor 2; NFE2-related factor 2; HEBP1; Nuclear factor; erythroid derived 2; like 2; NRF2; anti-NFE2L2 antibody

PRODUCT SPECIFICATIONS

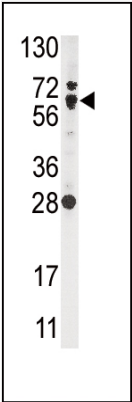
Host	Rabbit
Reactivity	Human (Predicted Reactivity: Mouse, Rat)
Clonality	Polyclonal
Isotype	Rabbit Ig
Specificity	This NFE2L2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 30-59 amino acids from the N-terminal region of human NFE2L2.
Purity/Purification	This antibody is purified through a protein G column, followed by dialysis against PBS.
Form/Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide.
Sequence Positions	30-59
Sequence Length	589
Applicable Applications for anti-NFE2L2 antibody	ELISA, WB (Western Blot)

Function	Transcription factor that plays a key role in the response to oxidative stress: binds to antioxidant response (ARE) elements present in the promoter region of many cytoprotective genes, such as phase 2 detoxifying enzymes, and promotes their expression, thereby neutralizing reactive electrophiles (PubMed:11035812, PubMed:19489739, PubMed:29018201, PubMed:31398338). In normal conditions, ubiquitinated and degraded in the cytoplasm by the BCR(KEAP1) complex (PubMed:11035812, PubMed:15601839, PubMed:29018201). In response to oxidative stress, electrophile metabolites inhibit activity of the BCR(KEAP1) complex, promoting nuclear accumulation of NFE2L2/NRF2, heterodimerization with one of the small Maf proteins and binding to ARE elements of cytoprotective target genes (PubMed:19489739, PubMed:29590092). The NFE2L2/NRF2 pathway is also activated in response to selective autophagy: autophagy promotes interaction between KEAP1 and SQSTM1/p62 and subsequent inactivation of the BCR(KEAP1) complex, leading to NFE2L2/NRF2 nuclear accumulation and expression of cytoprotective genes (PubMed:20452972). May also be involved in the transcriptional activation of genes of the beta-globin cluster by mediating enhancer activity of hypersensitive site 2 of the beta-globin locus control region (PubMed:7937919). Also plays an important role in the regulation of the innate immune response and antiviral cytosolic DNA sensing. It is a critical regulator of the innate immune response and survival during sepsis by maintaining redox homeostasis and restraint of the dysregulation of pro-inflammatory signaling pathways like MyD88-dependent and-independent and TNF-alpha signaling (By similarity). Suppresses macrophage inflammatory response by blocking pro-inflammatory cytokine transcription and the induction of IL6 (By similarity). Binds to the proximity of pro-inflammatory genes in macrophages and inhibits RNA Pol II recruitment. The inhibition is independent of the NRF2-binding motif and reactive oxygen species level (By similarity). Represses antiviral cytosolic DNA sensing by suppressing the expression of the adapter protein STING1 and decreasing responsiveness to STING1 agonists while increasing susceptibility to infection with DNA viruses (PubMed:30158636). Once activated, limits the release of pro-inflammatory cytokines in response to human coronavirus SARS-CoV-2 infection and to virus-derived ligands through a mechanism that involves inhibition of IRF3 dimerization. Also inhibits both SARS-CoV-2 replication, as well as the replication of several other pathogenic viruses including Herpes Simplex Virus-1 and -2, Vaccinia virus, and Zika virus through a type I interferon (IFN)-independent mechanism (PubMed:33009401).
Cellular Location	Cytoplasm, cytosol. Nucleus {ECO:0000255 PROSITE-ProRule:PRU00978, ECO:0000269 PubMed:11035812, ECO:0000269 PubMed:15601839, ECO:0000269 PubMed:21196497, ECO:0000269 PubMed:29983246}. Note=Cytosolic under unstressed conditions: ubiquitinated and degraded by the BCR(KEAP1) E3 ubiquitin ligase complex (PubMed:15601839, PubMed:21196497). Translocates into the nucleus upon induction by electrophilic agents that inactivate the BCR(KEAP1) E3 ubiquitin ligase complex (PubMed:21196497)
Tissue Location	Widely expressed. Highest expression in adult muscle, kidney, lung, liver and in fetal muscle
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C in small aliquots to prevent freeze-thaw cycles.

IMAGES



WB (Western Blot)
 Western blot analysis of Nrf2(Nfe2l2)(arrow) using rabbit polyclonal Nrf2(Nfe2l2) Antibody (N-term). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the Nrf2(Nfe2l2) gene (Lane 2) (Origene Technologies).



WB (Western Blot)
 Western blot analysis of anti-NFE2L2 Antibody (N-term) in Ramos cell line lysates (35ug/lane). Nrf2(arrow) was detected using the purified Pab.

ADDITIONAL INFORMATION

Related Product Information for anti-NFE2L2 antibody	NFE2 (MIM 601490), NFE2L1 (MIM 163260), and NFE2L2 comprise a family of human basic leucine zipper (bZIP) transcription factors. They share highly conserved regions that are distinct from other bZIP families, such as JUN (MIM 165160) and FOS (MIM 164810), although remaining regions have diverged considerably from each other (Chan et al., 1995).
Product Categories/Family for anti-NFE2L2 antibody	Cardiovascular; Cell Biology; Metabolism; Neuroscience; Signal Transduction
References	Zhao,X., Stroke 38 (12), 3280-3286 (2007) Li,M.H., J. Biol. Chem. 282 (39), 28577-28586 (2007)

NCBI AND UNIPROT INFORMATION

NCBI GI #	224028257
NCBI GeneID	4780
NCBI Accession #	NP_001138884.1; NP_001138885.1; NP_006155.2
NCBI GenBank Nucleotide #	NM_001145412.2
UniProt Accession #	Q16236; Q53RW6; Q59HH2; Q96F71; B2RBU2; B4E338; E9PGJ7
Molecular Weight	67827
NCBI Official Full Name	nuclear factor erythroid 2-related factor 2 isoform 2
NCBI Official Synonym Full Names	nuclear factor, erythroid 2-like 2
NCBI Official Symbol	NFE2L2
NCBI Official Synonym Symbols	NRF2
NCBI Protein Information	nuclear factor erythroid 2-related factor 2
UniProt Protein Name	Nuclear factor erythroid 2-related factor 2
UniProt Gene Name	NFE2L2
UniProt Synonym Gene Names	NRF2; NF-E2-related factor 2; NFE2-related factor 2
UniProt Entry Name	NF2L2_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/nfe2l2-antibody-western-blot-elisa/283939>