

Rabbit Anti-Nrf2 (Ser40) Polyclonal Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP52270**Specification****Rabbit Anti-Nrf2 (Ser40) Polyclonal Antibody - Product Information**

Application	WB, IHC-P
Primary Accession	Q16236
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal

Rabbit Anti-Nrf2 (Ser40) Polyclonal Antibody - Additional Information**Gene ID** 4780**Other Names**

NRF2; Nuclear factor erythroid 2-related factor 2; NF-E2-related factor 2; NFE2-related factor 2; HEBP1; Nuclear factor, erythroid derived 2, like 2; NFE2L2

Dilution

WB~~1:100~1:500<br \>IHC-P~~1:100~1:500

Format

0.01M TBS(pH7.4), 0.09% (W/V) sodium azide and 50% Glyce

Storage

Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Rabbit Anti-Nrf2 (Ser40) Polyclonal Antibody - Protein Information**Name** NFE2L2 {ECO:0000303|PubMed:29018201, ECO:0000312|HGNC:HGNC:7782}**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

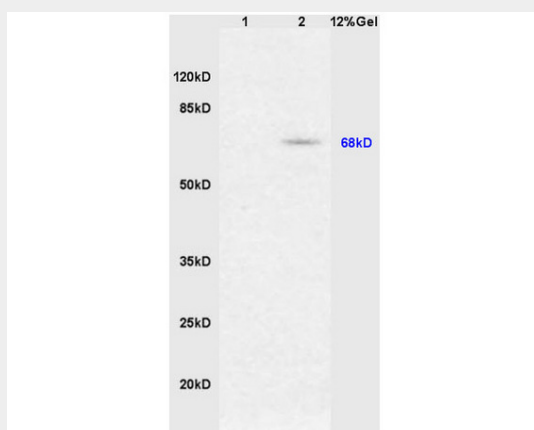
Widely expressed. Highest expression in adult muscle, kidney, lung, liver and in fetal muscle

Rabbit Anti-Nrf2 (Ser40) Polyclonal Antibody - Protocols

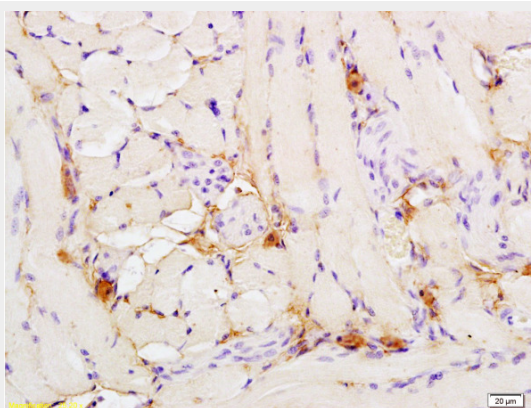
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

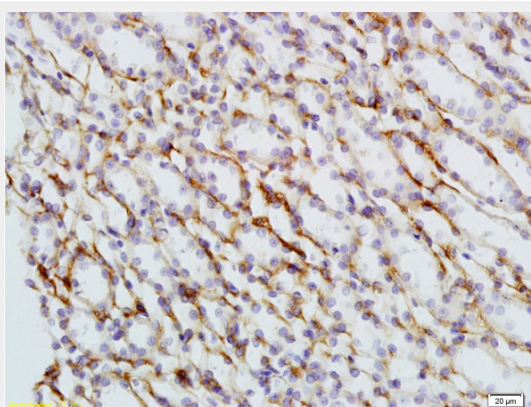
Rabbit Anti-Nrf2 (Ser40) Polyclonal Antibody - Images



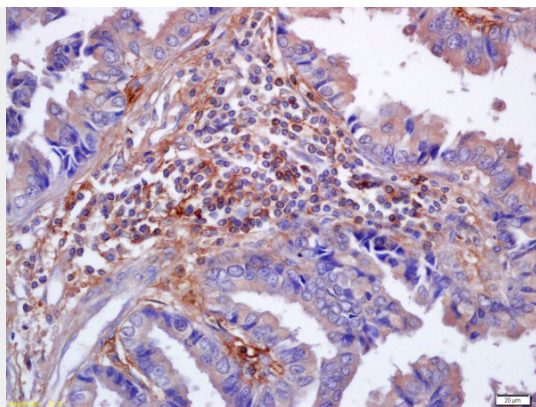
L1 mouse heart, L2 mouse muscle lysates probed (AP52270) at 1:200 in 4°C. Followed by conjugation to secondary antibody at 1:3000 90min in 37°C. Predicted and observed band size: 66kDa.



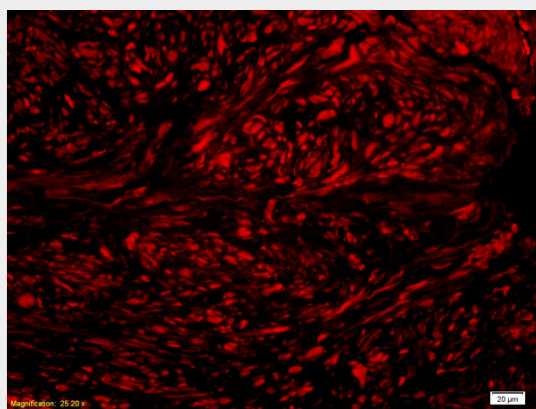
Formalin-fixed and paraffin embedded rat tongue tissue labeled with Anti-phospho-Nrf2 (Ser40) Polyclonal Antibody (AP52270), Unconjugated 1:200 followed by conjugation to the secondary antibody and DAB staining



Formalin-fixed and paraffin embedded rat kidney tissue labeled with Anti-phospho-Nrf2 (Ser40) Polyclonal Antibody AP52270, Unconjugated 1:200 followed by conjugation to the secondary antibody and DAB staining



Formalin-fixed and paraffin embedded human lung carcinoma labeled with Anti-phospho-Nrf2 (Ser40) Polyclonal Antibody, Unconjugated AP52270 at 1:200 followed by conjugation to the secondary antibody and DAB staining



Formalin-fixed and paraffin embedded human colon carcinoma tissue labeled with Anti-phospho-Nrf2 (Ser40) Polyclonal Antibody AP52270, Unconjugated 1:200 followed by conjugation to the secondary Cy5 antibody

Rabbit Anti-Nrf2 (Ser40) Polyclonal Antibody - Background

Transcription activator that binds to antioxidant response (ARE) elements in the promoter regions of target genes. Important for the coordinated up-regulation of genes in response to oxidative stress. May 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.

Rabbit Anti-Nrf2 (Ser40) Polyclonal Antibody - Citations

- [Scutellarin Prevents Nonalcoholic Fatty Liver Disease \(NAFLD\) and Hyperlipidemia via PI3K/AKT-Dependent Activation of Nuclear Factor \(Erythroid-Derived 2\)-Like 2 \(Nrf2\) in Rats.](#)