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Phospho-NFE2L2(S40) Antibody Blocking peptide

Synthetic peptide
Catalog # BP3626a

Specification

Phospho-NFE2L2(S40) Antibody Blocking peptide - Product Information

Primary Accession	Q16236
Other Accession	NP_006155

Phospho-NFE2L2(S40) Antibody Blocking peptide - Additional Information

Gene ID 4780

Other Names
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, NRF2

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP3626a was selected from the region of human Phospho-NFE2L2-pS40. 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.

Phospho-NFE2L2(S40) Antibody Blocking peptide - Protein Information

Phospho-NFE2L2(S40) Antibody Blocking peptide - Background

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).

Phospho-NFE2L2(S40) Antibody Blocking peptide - References

Zhao,X., Stroke 38 (12), 3280-3286 (2007)Li,M.H., J. Biol. Chem. 282 (39), 28577-28586 (2007)

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).

Cellular Location
Cytoplasm, cytosol. Nucleus {ECO:0000255|PROSITE-ProRule:PRU00978, ECO:0000269|PubMed:11035812, ECO:0000269|PubMed:15601839, ECO:0000269|PubMed:21196497} 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

Phospho-NFE2L2(S40) Antibody Blocking peptide - Protocols

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

- Blocking Peptides