abcam

ab200976

Alexa Fluor® 488 Anti-NRF1 antibody [EPR5554(N)]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 488
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR5554(N)
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human

Dilution info	1/200
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Expected

Species	Human, Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Expected

Species	Human, Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information NRF1

Function	Transcription factor that activates the expression of the EIF2S1 (EIF2-alpha) gene. Links the transcriptional modulation of key metabolic genes to cellular growth and development. Implicated in the control of nuclear genes required for respiration, heme biosynthesis, and mitochondrial DNA transcription and replication.

Storage

Shipped at conditions	Blue Ice

Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle, Store in the dark

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

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Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The nuclear respiratory factor 1 (NRF1) also known as Alpha-Pal is a transcription factor with an approximate molecular weight of 68 kDa. It plays an important role in the regulation of genes required for mitochondrial DNA transcription and replication. Researchers find NRF1 expression in various tissues including muscle brain and liver. This protein functions mechanistically by binding to specific promoter regions of target genes to control their expression making it essential for maintaining cellular energy metabolism.
Biological function summary	NRF1 influences the expression of genes involved in the mitochondrial function and is part of the transcriptional complex. This complex includes the NRF2 protein where NRF1 partners with co-activators to modulate gene transcription. NRF1 promotes the expression of components essential for mitochondrial biogenesis and cellular respiration which are vital processes for energy production in cells.

	Therefore NRF1 contributes to maintaining cellular energy homeostasis and overall cellular health.
Pathways	NRF1 integrates into critical regulatory pathways for mitochondrial function and metabolism. NRF1 links closely to the PGC-1α pathway which is instrumental in the regulation of energy metabolism and mitochondrial biogenesis. Additionally NRF1 works in conjunction with NRF2 to regulate oxidative stress responses. These interactions ensure a coordinated cellular response to energy demands and help protect the cell from oxidative damage.
Associated diseases and disorders	NRF1 associates with neurodegenerative diseases and metabolic syndromes. Altered NRF1 regulation can impact diseases such as Alzheimer's disease where it may contribute to neurodegeneration through impaired mitochondrial function. Moreover the dysfunction of NRF1 might relate to metabolic disorders like diabetes as energy metabolism and mitochondrial health are disrupted. NRF1 connects with proteins like SIRT1 in these contexts further implicating NRF1 in these pathological states through its role in energy homeostasis and stress response.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

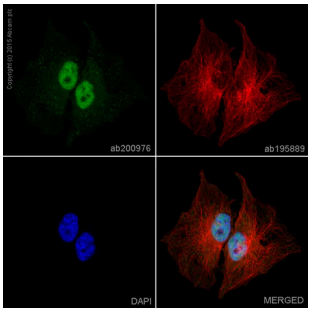
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

1 product image



Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 488 Anti-NRF1 antibody [EPR5554(N)] (ab200976)

NRF1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-NRF1 antibody

ab200976 staining NRF1 in HeLa cells. The cells were fixed with 4% formaldehyde (10min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab200976 at 1/200 dilution (shown in green) and ab195889, Mouse monoclonal to alpha Tubulin (Alexa Fluor® 594), at 2µg/ml (shown in red). Nuclear DNA was labelled with DAPI (shown in blue).
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

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