abcam

ab68556

Anti-AHNAK antibody [EM-09]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.4 Preservative: 0.097% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Human AHNAK. The exact immunogen used to generate this antibody is proprietary information. Database link Q09666
Clone number	EM-09
Purification technique	Affinity purification Protein A
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	ab68556 is purified from hybridoma culture supernatant. Purity >95% by SDS-PAGE.

Reactivity data

ICC

Tested

Species	Human
Dilution info	1/250
Notes	Permeabilization is required.

Expected

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

Not recommended

Species	Rat
Dilution info	-
Notes	Permeabilization is required.

Flow Cyt

Tested

Species	Human
Dilution info	1 µg for 10^6 Cells
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Expected

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

Not recommended

Species	Rat
Dilution info	-
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

WB

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Not recommended

Species	Rat
Dilution info	-
Notes	-

IHC-Fr

Tested

Species	Mouse
Dilution info	-
Notes	-

Expected

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

Not recommended

Species	Rat
Dilution info	-
Notes	-

Target data

See full target information AHNAK

Function	May be required for neuronal cell differentiation.

Storage

Shipped at conditions	Blue Ice
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

Supplementary info

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

Activity summary	The AHNAK protein also known as "giant ankyrin repeat-containing protein" or "desmoyokin" has a large molecular mass of approximately 700 kDa. It is expressed in various tissues including heart skeletal muscle and brain. The protein is characterized by its repeated ankyrin-like motifs which are essential for protein-protein interactions. AHNAK is localized to the plasma membrane cytoplasm and sometimes the nucleus indicating its versatile roles within cells.
Biological function summary	AHNAK has key functions in cell structure and signaling. It can form a complex with other proteins such as S100 family proteins influencing calcium binding and signal transduction. This complex plays a role in the regulation of the cytoskeleton and membrane repair processes. Additionally AHNAK participates in cellular stress responses and impacts cell adhesion by interacting with membrane-associated proteins.
Pathways	AHNAK interacts with pathways involving calcium signaling and cytoskeletal organization. It links to the calcium-binding protein S100B facilitating downstream signaling that impacts cellular responses to external stimuli. Another pathway involves plasma membrane repair where AHNAK partners with annexin proteins to reseal damaged membranes and maintain cellular integrity.
Associated diseases and disorders	AHNAK associates with cardiomyopathies and certain types of cancer. In cardiac conditions its interaction with proteins like dystrophin is important for maintaining muscle cell integrity during contraction. The dysregulation of AHNAK in cancer can

influence cell motility and invasiveness highlighting its potential as a biomarker for tumor progression.

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

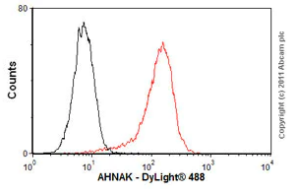
We do not recommend this combination. It is not covered by our product promise.

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.

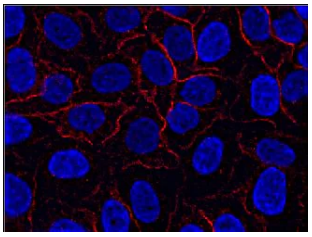
5 product images



Flow Cytometry - Anti-AHNAK antibody [EM-09] (ab68556)

AHNAK Flow Cytometry staining using mouse Anti-AHNAK antibody

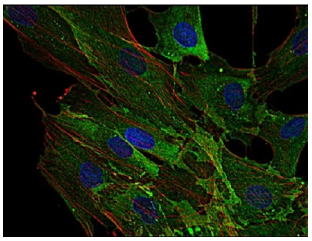
Overlay histogram showing HeLa cells stained with ab68556 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab68556, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in Hela cells fixed with 4% paraformaldehyde (10 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.



Immunocytochemistry - Anti-AHNAK antibody [EM-09] (ab68556)

AHNAK Immunocytochemistry staining using mouse Anti-AHNAK antibody

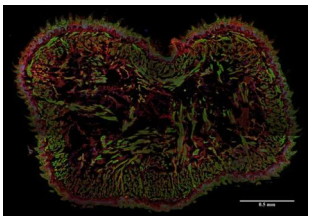
ab68556 at 1/250 dilution staining AHNAK (red) in HeLa cells by Immunocytochemistry/Immunofluorescence. Nuclei were stained with DAPI (blue).



Immunocytochemistry - Anti-AHNAK antibody [EM-09] (ab68556)

AHNAK Immunocytochemistry staining using mouse Anti-AHNAK antibody

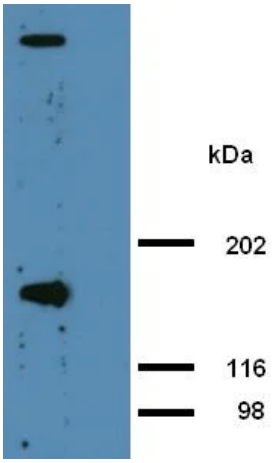
Human primary fibroblasts stained with ab68556 (green). Actin filaments were decorated by phalloidin (red) and cell nuclei stained with DAPI (blue).



Immunohistochemistry (Frozen sections) - Anti-AHNAK antibody [EM-09] (ab68556)

AHNAK Immunohistochemistry (Frozen sections) staining using mouse Anti-AHNAK antibody

ab68556 (red) staining AHNAK in murine tongue by immunohistochemistry using frozen tissue sections. Actin filaments were decorated by phalloidin (green), cell nuclei stained with DAPI (blue).



Western blot - Anti-AHNAK antibody [EM-09] (ab68556)

AHNAK Western blot staining using mouse Anti-AHNAK antibody

The material was 1% lauryl maltoside lysate of HeLa cells, non-reducing conditions, immunoprecipitated with another anti-AHNAK1 antibody. 4% stacking gel, 6% separating gel, U=190 V, 60 min. Blotting: 30 mA, 90 min. Detection antibody concentration: 2 microgram/ml. Please note the conditions were not optimalized.
All lanes:
Western blot - Anti-AHNAK antibody [EM-09] (ab68556) at 2 µg/mL

Performed under non-reducing conditions.

Predicted band size: 629 kDa

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