abcam

ab117927

Anti-AK5 antibody [OTI1D6]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.3 Preservative: 0.02% Sodium azide Constituents: PBS, 50% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Full Length Protein corresponding to Human Adenylate kinase isoenzyme 5. Database link Q9Y6K8
Clone number	OTI1D6
Purification technique	Affinity purification
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from cell culture supernatant by affinity chromatography.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	African green monkey
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Human
Dilution info	1/2000
Notes	-

Expected

Species	African green monkey
Dilution info	Use at an assay dependent concentration.
Notes	-

ICC/IF

Tested

Species	African green monkey
Dilution info	1/100
Notes	-

Expected

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

Target data

See full target information Adenylate kinase isoenzyme 5

Function	Nucleoside monophosphate (NMP) kinase that catalyzes the reversible transfer of the terminal phosphate group between nucleoside triphosphates and monophosphates. Active on AMP and dAMP with ATP as a donor. When GTP is used as phosphate donor, the enzyme phosphorylates AMP, CMP, and to a small extent dCMP. Also displays broad nucleoside diphosphate kinase activity.

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

Notes

Clone OTI1D6 (formerly 1D6).

Supplementary info

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

Activity summary	AK5 or Adenylate Kinase 5 is an enzyme with a specialized role in phosphate group transfer. It functions by catalyzing the reversible transfer of phosphate groups from ATP to AMP which results in the production of ADP. The enzyme has a molecular mass of approximately 26 kDa. AK5 typically shows expression in the brain where it can significantly influence energy transfer and cellular energy balance.
Biological function summary	The function of AK5 involves maintaining energy homeostasis in neural cells. It does not act independently; rather it functions as a part of a larger complex that regulates cellular energetic states. In neural tissues AK5 may have substantial impacts on cellular activity by controlling the levels of key adenylates therefore influencing intracellular signaling pathways.
Pathways	AK5 plays a part in the cellular energy homeostasis pathway and is integral to the purine metabolism pathway. In these pathways AK5 interacts with other adenylate

	kinases and has associations with enzymes such as AMP-activated protein kinase (AMPK) which acts as an energy sensor. AK5's role in these pathways helps to maintain the balance of adenine nucleotides critical for cellular functions.
Associated diseases and disorders	Abnormalities in AK5 expression or function can be associated with neurological conditions such as epilepsy. AK5's connection with epilepsy relates partly through its involvement in maintaining proper cellular energetic conditions critical for normal neural activity. It may also relate to metabolic disorders because changes in adenylate kinase function can impact metabolic regulation in the brain. AK5's relationship with AMPK hints at how it might link to these conditions given AMPK's role in detecting cellular energy levels.

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

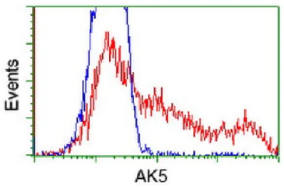
We do not recommend this combination. It is not covered by our product promise.

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.

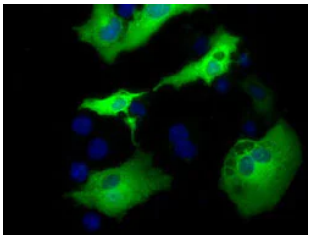
3 product images



Flow Cytometry - Anti-AK5 antibody [OTI1D6] (ab117927)

AK5 Flow Cytometry staining using mouse Anti-AK5 antibody

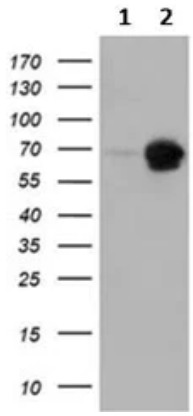
Flow Cytometry analysis of HEK-293T (Human epithelial cell line from embryonic kidney transformed with large T antigen) cells transfected with AK5 (Myc-DDK-tagged)-Human adenylate kinase 5 (AK5), transcript variant 1, using ab117927 (red) compared to an empty vector control plasmid (blue).



Immunocytochemistry/ Immunofluorescence - Anti-AK5 antibody [OTI1D6] (ab117927)

AK5 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-AK5 antibody

pCMV6-ENTRY AK5 cDNA transfected COS-7 (African green monkey kidney fibroblast-like cell line) cells stained for AK5 using ab117927 at a 1/100 dilution in ICC/IF.



Western blot - Anti-AK5 antibody [OTI1D6] (ab117927)

All lanes:
Western blot - Anti-AK5 antibody [OTI1D6] (ab117927) at 1/2000 dilution

Lane 1:
HEK-293T (Human epithelial cell line from embryonic kidney transformed with large T antigen) cells transfected with pCMV6-ENTRY control at 5 µg

Lane 2:
HEK-293T cells transfected with pCMV6-ENTRY AK5 cDNA at 5 µg

Predicted band size: 63 kDa

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