abcam

ab119424

Anti-RGS16 antibody [OTI4E5]

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 RGS16. Database link O15492
Clone number	OTI4E5
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	1/100
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Expected

Species	Mouse, African green monkey, Dog, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Transfected cell lysate - Human, Transfected cell line - Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/500 - 1/2000
Notes	-

Species	Transfected cell lysate - Human
Dilution info	1/500 - 1/2000
Notes	-

Species	Mouse
Dilution info	1/500 - 1/2000
Notes	-

Species	African green monkey
Dilution info	1/500 - 1/2000
Notes	-

Species	Dog
Dilution info	1/500 - 1/2000
Notes	-

Species	Rat
Dilution info	1/500 - 1/2000
Notes	-

Not recommended

Species	Transfected cell line - Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/150
Notes	-

Expected

Species	Mouse, African green monkey, Dog, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Transfected cell lysate - Human, Transfected cell line - Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Transfected cell line - Human
Dilution info	1/100

Notes	-

Expected

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

Not recommended

Species	Transfected cell lysate - Human
Dilution info	-
Notes	-

Target data

See full target information RGS16

Function	Regulates G protein-coupled receptor signaling cascades. Inhibits signal transduction by increasing the GTPase activity of G protein alpha subunits, thereby driving them into their inactive GDP-bound form (PubMed:11602604, PubMed:18434541). Plays an important role in the phototransduction cascade by regulating the lifetime and effective concentration of activated transducin alpha. May regulate extra and intracellular mitogenic signals (By similarity).

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 OTI4E5 (formerly 4E5).

Supplementary info

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

Activity summary	RGS16 also known as Regulator of G-protein Signaling 16 acts as a GTPase-activating protein (GAP) specifically for Gα subunits of heterotrimeric G-proteins. By accelerating the hydrolysis of GTP to GDP RGS16 effectively turns off G-protein signaling. It has a molecular mass of approximately 23 kDa. RGS16 expresses in various tissues including the liver pancreas and brain suggesting a regulatory role in diverse physiological contexts.
Biological function summary	The G-protein signaling regulation by RGS16 affects cellular responses to extracellular signals. RGS16 is not part of a larger protein complex but interacts directly with Gα subunits to modulate their activity. Its regulatory actions facilitate precise control over signal duration contributing to processes such as cell proliferation differentiation and metabolism. These functions emphasize its importance in cellular communication and response.
Pathways	The signaling regulation by RGS16 influences the MAPK/ERK and PI3K/AKT pathways both of which are critical for regulating cell growth and survival. RGS16 interacts with G-proteins linked to receptors like GPCRs which are upstream modulators of these pathways. By influencing these pathways RGS16 therefore plays a role in controlling cell proliferation and differentiation. Another protein related to these pathways through RGS16 is Gαi which RGS16 specifically acts upon to terminate signaling.
Associated diseases and disorders	Alterations in RGS16 expression or function can contribute to cancer and metabolic disorders such as diabetes. RGS16 influences these conditions by modulating signaling pathways that regulate cell growth and insulin signaling. In cancer RGS16 can affect tumor progression and metastasis through its interaction with the MAPK/ERK pathway. The protein also connects with insulin receptor signaling in metabolic disorders linking RGS16 to the regulation of glucose homeostasis and insulin sensitivity.

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

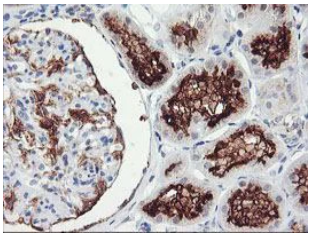
We do not recommend this combination. It is not covered by our product promise.

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.

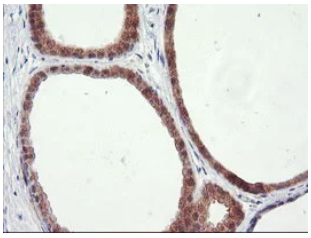
Full details and terms and conditions can be found here:
Terms & Conditions.

7 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RGS16 antibody [OTI4E5] (ab119424)

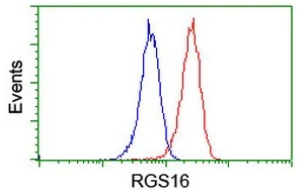
Paraffin-embedded human kidney tissue stained for RGS16 using ab119424 at 1/150 dilution in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RGS16 antibody [OTI4E5] (ab119424)

RGS16 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-RGS16 antibody

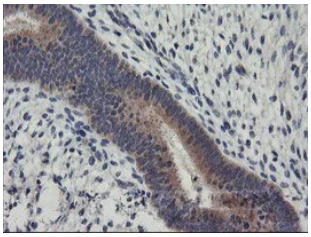
Paraffin-embedded human breast tissue stained for RGS16 using ab119424 at 1/150 dilution in immunohistochemical analysis.



Flow Cytometry - Anti-RGS16 antibody [OTI4E5] (ab119424)

RGS16 Flow Cytometry staining using mouse Anti-RGS16 antibody

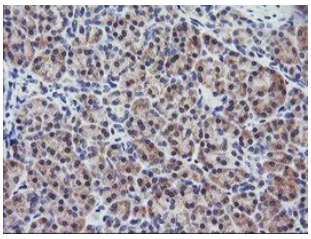
Flow cytometric analysis of jurkat (human T cell leukemia cell line from peripheral blood) cells staining RGS16 (red) using ab119424 at 1/100 dilution compared to a nonspecific negative control antibody (Blue).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RGS16 antibody [OTI4E5] (ab119424)

RGS16 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-RGS16 antibody

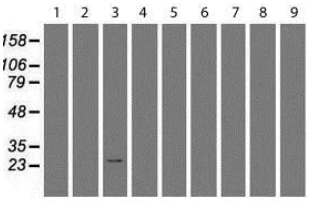
Paraffin-embedded human endometrium tissue stained for RGS16 using ab119424 at 1/150 dilution in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RGS16 antibody [OTI4E5] (ab119424)

RGS16 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-RGS16 antibody

Paraffin-embedded human pancreas tissue stained for RGS16 using ab119424 at 1/150 dilution in immunohistochemical analysis.



Western blot - Anti-RGS16 antibody [OTI4E5] (ab119424)

All lanes:
Western blot - Anti-RGS16 antibody [OTI4E5] (ab119424) at 1/500 dilution

Lane 1:
HepG2 (human liver hepatocellular carcinoma cell line) cell lysate at 35 µg

Lane 2:
HeLa (human epithelial cell line from cervix adenocarcinoma) cell lysate at 35 µg

Lane 3:
SVT2 cell extract at 35 µg

Lane 4:
A549 (human lung carcinoma cell line) cell lysate at 35 µg

Lane 5:
COS-7 (African green monkey kidney fibroblast-like cell line) cell lysate at 35 µg

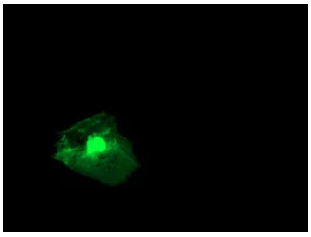
Lane 6:
Jurkat (human T cell leukemia cell line from peripheral blood) cell lysate at 35 µg

Lane 7:
MDCK cell extract at 35 µg

Lane 8:
PC-12 (rat adrenal gland pheochromocytoma cell line) cell lysate at 35 µg

Lane 9:
MCF7 (human breast adenocarcinoma cell line) cell lysate at 35 µg

Predicted band size: 23 kDa



Immunocytochemistry/ Immunofluorescence - Anti-RGS16 antibody [OTI4E5] (ab119424)

RGS16 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-RGS16 antibody

COS-7 (African green monkey kidney fibroblast-like cell line) cells transiently transfected with pCMV6-ENTRY RGS16, stained for RGS16 (green) using ab119424 at 1/100 dilution in ICC/IF.

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