

Anti-GRK1 antibody [G8] ab2775

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Overview

Product name	Anti-GRK1 antibody [G8]
Description	Mouse monoclonal [G8] to GRK1
Host species	Mouse
Specificity	Detects G-protein-associated rhodopsin kinase 1a (GRK1a).
Tested applications	Suitable for: ICC/IF
Species reactivity	Reacts with: Mouse, Cow, Human
Immunogen	Full length native protein (purified) corresponding to Human GRK1.
Epitope	This antibody recognizes an epitope in the C-terminal region of GRK1a.
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.05% Sodium azide
Purity	Protein G purified
Primary antibody notes	The sensation of sight is the result of a cascade of events starting with the interaction of photoactivated rhodopsin with a protein called transducin. Rhodopsin kinase is a G-protein-coupled Ser/Thr kinase, also known as GRK1, which is a key element in the regulation of this cascade. Following phosphorylation by GRK1, arrestin is recruited to phospho-rhodopsin quenching its phototransductive activity by preventing further interaction with transducin. By breaking the cycle of phototransduction, GRK1 plays an important role in the restoration of the system for subsequent visual events.
Clonality	Monoclonal

Clone number G8
Isotype IgG1

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab2775 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF		1/100 - 1/200.

Target

Function Retina-specific kinase involved in the signal turnoff via phosphorylation of rhodopsin (RHO), the G protein- coupled receptor that initiates the phototransduction cascade. This rapid desensitization is essential for scotopic vision and permits rapid adaptation to changes in illumination.

Tissue specificity Retinal-specific. Expressed in rods and cones cells.

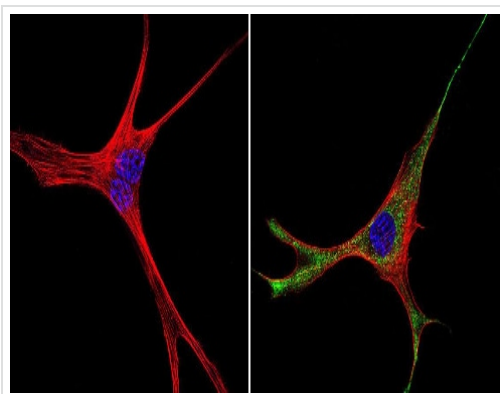
Involvement in disease Night blindness, congenital stationary, Oguchi type 2

Sequence similarities Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. GPRK subfamily. Contains 1 AGC-kinase C-terminal domain. Contains 1 protein kinase domain. Contains 1 RGS domain.

Post-translational modifications Autophosphorylated, Ser-21 is a minor site of autophosphorylation compared to Ser-491 and Thr-492 (By similarity). Phosphorylation at Ser-21 is regulated by light and activated by cAMP. Farnesylation is required for full activity.

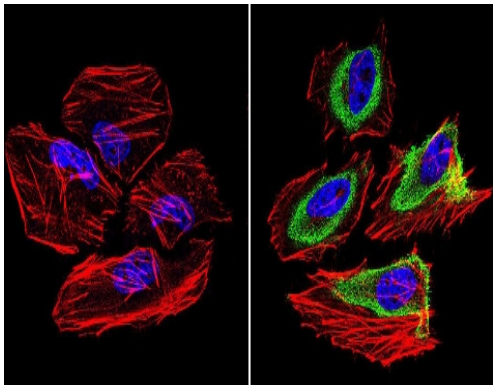
Cellular localization Membrane.

Images



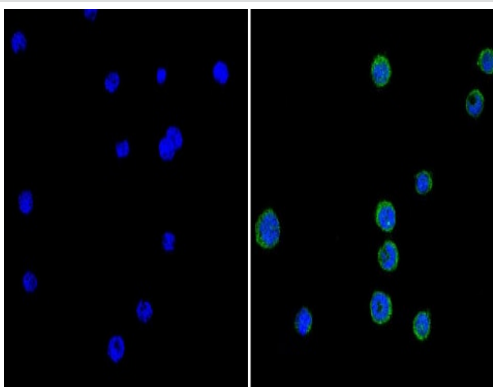
Immunocytochemistry/ Immunofluorescence - Anti-GRK1 antibody [G8] (ab2775)

Immunocytochemistry/Immunofluorescence analysis of GRK1 (green) in murine cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes at room temperature and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were incubated with ab2775 (1:200) overnight in a humidified chamber. Cells were washed with PBST and incubated with a DyLight-conjugated secondary antibody for 45 minutes at room temperature in the dark. F-actin (red) was stained with a fluorescent phalloidin and nuclei (blue) were stained with DAPI. Images were taken at a 60X magnification.



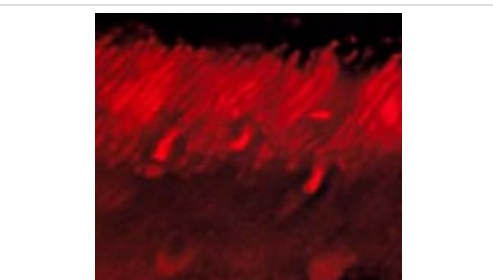
Immunocytochemistry/ Immunofluorescence - Anti-GRK1 antibody [G8] (ab2775)

Immunocytochemistry/Immunofluorescence analysis of GRK1 (green) in HeLa cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes at room temperature and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were incubated with ab2775 (1:200) overnight in a humidified chamber. Cells were washed with PBST and incubated with a DyLight-conjugated secondary antibody for 45 minutes at room temperature in the dark. F-actin (red) was stained with a fluorescent phalloidin and nuclei (blue) were stained with DAPI. Images were taken at a 60X magnification.



Immunocytochemistry/ Immunofluorescence - Anti-GRK1 antibody [G8] (ab2775)

Immunocytochemistry/Immunofluorescence analysis of GRK1 (green) in human cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes at room temperature and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were incubated with ab2775 (1:100) overnight in a humidified chamber. Cells were washed with PBST and incubated with a DyLight-conjugated secondary antibody for 45 minutes at room temperature in the dark. F-actin (red) was stained with a fluorescent phalloidin and nuclei (blue) were stained with DAPI. Images were taken at a 60X magnification.



Immunocytochemistry/ Immunofluorescence - Anti-GRK1 antibody [G8] (ab2775)

Immunolocalization of GRK1 in bovine retina using ab2775.

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