

PRODUCT INFORMATION



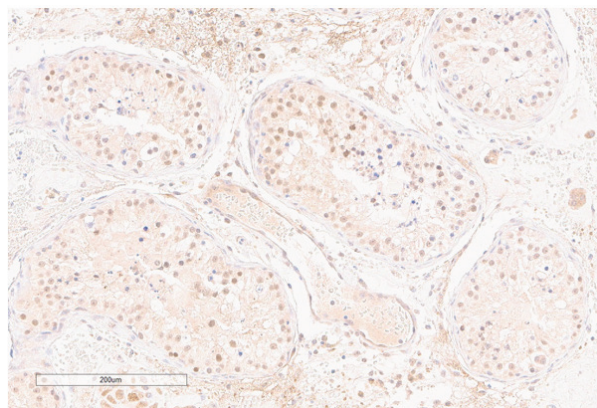
GPR18 (C-Term) Polyclonal Antibody

Item No. 27342

Overview and Properties

Contents:	This vial contains 500 µl of peptide affinity-purified antibody.
Synonyms:	N-Arachidonyl Glycine Receptor, GPCRW, G Protein-Coupled Receptor 18, NAGly Receptor
Immunogen:	Synthetic peptide from the C-terminal region of human GPR18
Species Reactivity:	(+) Human; other species not tested
Uniprot No.:	Q14330
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥3 years
Storage Buffer:	PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
Host:	Rabbit
Applications:	ELISA and immunohistochemistry (IHC); the recommended starting dilution is 1:200. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



Immunohistochemistry analysis of formalin-fixed, paraffin-embedded (FFPE) human testis tissue after heat-induced antigen retrieval in pH 6.0 citrate buffer. After incubation with GPR18 (C-Term) Polyclonal Antibody (Item No. 27342) at a 1:200 dilution, slides were incubated with biotinylated secondary antibody, followed by alkaline phosphatase-streptavidin and chromogen (DAB).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/03/2024

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

PRODUCT INFORMATION



Description

GPR18 is a G protein-coupled receptor (GPCR) that is expressed in lymphoid tissues, lung, brain, testis, and ovaries.¹ It is coupled to the $G_{ai/o}$ and $G_{aq/11}$ transduction pathways and is activated by the polyunsaturated fatty acid metabolite resolvin D2 (Item No. 10007279) and the endocannabinoid arachidonoyl glycine (NAGly; Item No. 90051) in a context-dependent manner.^{1,2} Resolvin D2-induced activation of GPR18 reduces inflammatory pain induced by formalin, carrageenan, and complete Freund's adjuvant (CFA) in rats and reduces production of pro-inflammatory cytokines in mouse models of cecal ligation and puncture-induced sepsis, ocular infections, and ischemic injury.^{3,4} NAGly-induced activation of GPR18 lowers intraocular pressure (IOP) in mice in a fatty acid amide hydrolase-dependent manner.⁵ GPR18 is also overexpressed and constitutively active in patient-derived metastatic melanoma tumor samples.⁶ Cayman's GPR18 (C-Term) Polyclonal Antibody can be used for ELISA and immunohistochemistry (IHC) applications. The antibody recognizes the C-terminal region of GPR18 from human samples.

References

1. Morales, P. and Reggio, P.H. An update on non-CB₁, non-CB₂ cannabinoid related G-protein-coupled receptors. *Cannabis Cannabinoid Res.* **2**(1), 265-273 (2017).
2. Mahardhika, A.B., Zaluski, M., Schoeder, C.T., et al. Potent, selective agonists for the cannabinoid-like orphan G protein-coupled receptor GPR18: A promising drug target for cancer and immunity. *J. Med. Chem.* **67**(12), 9896-9926 (2024).
3. Zhang, L.-Y., Liu, Z.-H., Zhu, Q., et al. Resolvin D2 relieving radicular pain is associated with regulation of inflammatory mediators, Akt/GSK-3 β signal pathway and GPR18. *Neurochem. Res.* **43**(12), 2384-2392 (2018).
4. Zhang, M.J., Sansbury, B.E., Hellmann, J., et al. Resolvin D2 enhances post-ischemic revascularization while resolving inflammation. *Circulation* **134**(9), 666-680 (2016).
5. Miller, S., Leishman, E., Oehler, O., et al. Evidence for a GPR18 role in diurnal regulation of intraocular pressure. *Invest. Ophthalmol. Vis. Sci.* **57**(14), 6419-6426 (2016).
6. Qin, Y., Verdegaal, E.M.E., Siderius, M., et al. Quantitative expression profiling of G-protein-coupled receptors (GPCRs) in metastatic melanoma: The constitutively active orphan GPCR GPR18 as novel drug target. *Pigment Cell Melanoma Res.* **24**(1), 207-218 (2011).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM