

Purified anti-P2RY12 Antibody

Catalog# / Size	848001 / 25 µg 848002 / 100 µg
Clone	S16007D
Regulatory Status	RUO
Other Names	P2Y12, ADPG-R, BDPLT8, HORK3, P2T(AC), P2Y(12)R, P2Y(AC), P2Y(ADP), P2Y(cyc), P2Y12P2Y12 platelet ADP receptor, purinergic receptor P2RY12, purinergic receptor P2Y, G-protein coupled, 12
Isotype	Rat IgG2b, κ
Description	Purinergic Receptor P2Y (P2RY12) is a receptor for ADP and ATP coupled to G-proteins that inhibit the adenylyl cyclase second messenger system. P2RY12 is not activated by UDP and UTP. Required for normal platelet aggregation and blood coagulation. P2RY12 is a highly selective marker for microglia that specifically distinguishes these cells from other myeloid cells.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Mouse P2RY12.
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	IHC-P - Quality tested FC - Verified
Recommended Usage	Each lot of this antibody is quality control tested by formalin-fixed paraffin-embedded immunohistochemical staining. For immunohistochemistry, a concentration range of 5.0 - 10 µg/ml is suggested. For flow cytometric staining, a concentration range of 0.5 - 5.0 µg/ml is suggested. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	View the video of our collaborator discussing the importance of highly specific monoclonal antibodies for P2RY12 in Microglia research. Learn more about the validation testing we performed on clone S16007D by watching our Scientific Poster Video .
Additional Product Notes	View more applications data for this product in our Scientific Poster Library .
Product Citations	<ol style="list-style-type: none">1. Gras S, <i>et al.</i> 2021. Aging (Albany NY). 13:18051. PubMed2. Chen HR, <i>et al.</i> 2022. Theranostics. 12:512. PubMed3. Manich G, <i>et al.</i> 2020. Front Cell Neurosci. 14:567404. PubMed4. Malsy J, <i>et al.</i> 2020. Elife. 9:00. PubMed5. Shi X, <i>et al.</i> 2021. Nat Commun. 12:6943. PubMed6. Werneburg S, <i>et al.</i> 2020. Immunity. 52(1):167-182.e7.. PubMed7. Safaiyan S, <i>et al.</i> 2021. Neuron. 109(7):1100-1117.e10. PubMed8. Funk KE, <i>et al.</i> 2019. J Neuroinflammation. 16:22. PubMed9. Zhou X, <i>et al.</i> 2020. Nat Neurosci. 1.192361111. PubMed10. Li Y, <i>et al.</i> 2021. J Neurochem. 159:867. PubMed11. Lin R, <i>et al.</i> 2022. Nat Methods. 19:976. PubMed12. Gunner G, <i>et al.</i> 2019. Nat Neurosci. 1.663194444. PubMed13. Wang L, <i>et al.</i> 2022. Front Cell Neurosci. 15:786020. PubMed

14. Peruzzotti-Jametti L, *et al.* 2018. *Cell Stem Cell.* 22:355. [PubMed](#)
15. de Kleijn KMA, *et al.* 2022. *Biomedicines.* 10:. [PubMed](#)
16. Wahane S, *et al.* 2021. *Sci Adv.* 7:. [PubMed](#)

RRID AB_2650633 (BioLegend Cat. No. 848001)
AB_2650634 (BioLegend Cat. No. 848002)

Antigen Details

Structure	P2RY12 is a 347 amino acid protein with a molecular mass of 39.8 kD.
Distribution	Tissue distribution: platelets, brain (microglia), lung, appendix, pituitary and adrenal glands. Cellular distribution: cell membrane and cytosol.
Function	G-protein coupled receptor that inhibits the adenylyl cyclase second messenger system.
Ligand/Receptor	ADP and ATP.
Cell Type	Microglia, Platelets
Biology Area	Cell Biology, Immunology, Innate Immunity, Neuroscience, Neuroscience Cell Markers
Molecular Family	GPCR, Purinergic Receptors
Antigen References	1. Orr AG, <i>et al.</i> 2009. <i>Nat. Neurosci.</i> 12(7):872-8.
Gene ID	70839

Related Protocols

[Whole Mouse Brain Processing for Microglia Isolation, Cell Separation, and Flow Cytometry](#)

[Cell Surface Flow Cytometry Staining Protocol](#)

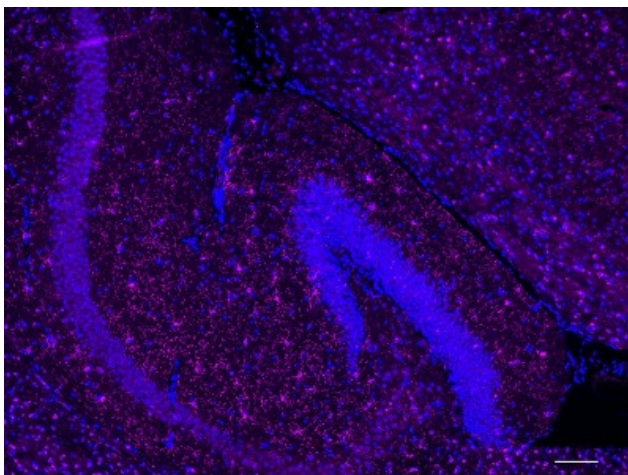
[Immunocytochemistry Staining Protocol](#)

[Immunohistochemistry Protocol for Paraffin-Embedded Sections](#)

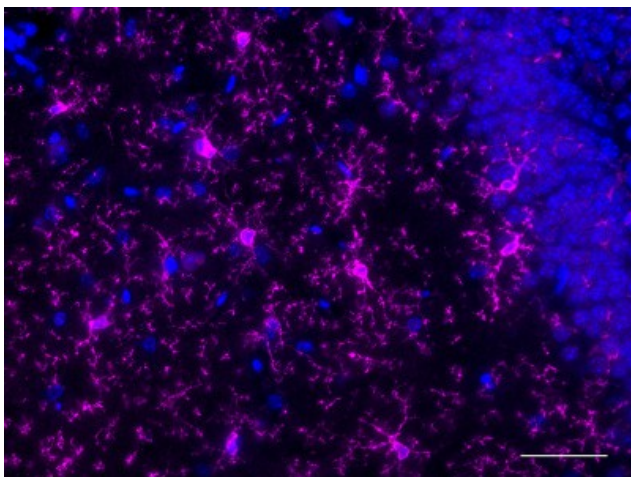
Other Formats

Purified anti-P2RY12, PE anti-P2RY12, APC anti-P2RY12, Biotin anti-P2RY12, TotalSeq™-A0415 anti-P2RY12, Spark YG™ 570 anti-P2RY12 Antibody, APC/Fire™ 810 anti-P2RY12, Alexa Fluor® 488 anti-P2RY12

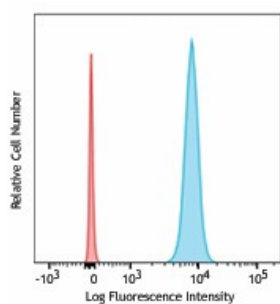
Product Data



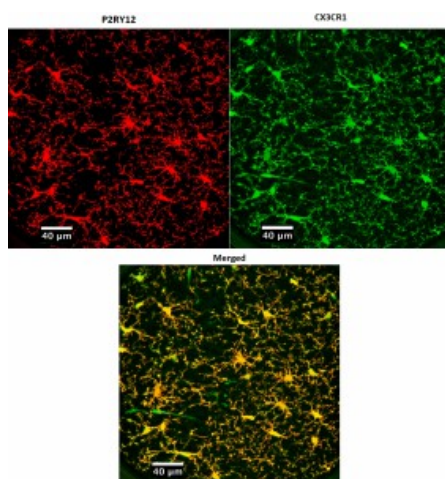
IHC staining of purified anti-P2RY12 antibody (clone S16007D) on formalin-fixed paraffin-embedded mouse brain tissue. Following antigen retrieval using Retrieve-All Antigen Unmasking System 3 (Cat. No. 927801), the tissue was incubated with the primary antibody at 5 µg/mL overnight at 4°C, followed by incubation with 2.5 µg/ml of Alexa Fluor® 647 conjugated Goat anti-rat IgG (Cat. No. 405416) for 1 hour at room temperature. Nuclei were counterstained with DAPI. The image was captured with a 10X objective. Scale bar: 100 µm



IHC staining of purified anti-P2RY12 antibody (clone S16007D) on formalin-fixed paraffin-embedded mouse brain tissue. Following antigen retrieval using Retrieve-All Antigen Unmasking System 3 (Cat. No. 927801), the tissue was incubated with the primary antibody at 5 µg/mL overnight at 4°C, followed by incubation with 2.5 µg/ml of Alexa Fluor® 647 conjugated Goat anti-rat IgG (Cat. No. 405416) for 1 hour at room temperature. Nuclei were counterstained with DAPI. The image was captured with a 40X objective. Scale bar: 50 µm



Single cell suspension of mouse brain tissue was stained with purified anti-P2RY12 antibody (clone S16007D, blue histogram) or rat IgG isotype control (red histogram), followed by anti-rat antibody conjugated to APC for detection.



IHC staining of purified anti-P2RY12 antibody (clone S16007D) on 4%-formaldehyde fixed mouse brain tissue. Following thick (100µm) vibratome sectioning, the slices were blocked for 1h at RT with 10%NGS and 1%BSA in PBST (pH=7.4 PBS + 0.1% Tween20), incubated with the primary antibody at 5 µg/ml overnight at 4°C, followed by incubation with 2.5 µg/ml of Alexa Fluor® 647 conjugated Goat anti-rat IgG (Cat. No. 405416) for 2h at RT. CX3CR1-GFP signal enabled validation of the microglial-specific anti-P2RY12 staining (pseudocolored red). The above images are maximal intensity projections from 40µm-thick z-stacks captured with a 60X objective on a confocal laser scanning microscope. The images are a courtesy of Dr. Alberto Sepulveda-Rodriguez and Dr. Stefano Vicini, Department of Pharmacology and Physiology, Interdisciplinary Program in Neuroscience, Georgetown University Medical Center.

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