CD304 (Neuropilin-1) Monoclonal Antibody (3DS304M), PE-eFluor™ 610, eBioscience™

Product Details	
Size	100 µg
Species Reactivity	Mouse
Published Species	Mouse
Host/Isotype	Rat / IgG2a, kappa
Recommended Isotype Control	Rat IgG2a kappa Isotype Control (eBR2a), PE-eFluor™ 610, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	3DS304M
Conjugate	PE-eFluor™ 610
Excitation/Emission Max	565/606 nm
Form	Liquid
Concentration	0.2 mg/mL
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2
Contains	0.09% sodium azide
Storage conditions	4° C, store in dark, DO NOT FREEZE!
RRID	AB_2574600

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	0.5 µg/test	2 Publications

Product Specific Information

Description: The monoclonal antibody 3DS304M recognizes mouse CD304 (Neuropilin-1), a type 1 transmembrane glycoprotein present on the surface of multiple cell types, including: regulatory T cells (Treg), NKT cells, DC, certain types of stem cells, neurons, endothelial cells, and some neoplastic cells. Neuropilin-1, in complex with plexins, serves as a co-receptor for type 3 semaphorins in growing neurons. It is also involved in the process of angiogenesis being a part of a functional receptor for VEGF in endothelial cells. In mice, Neuropilin-1 is expressed on thymus-derived natural Treg but not peripherally induced Treg. In addition, transient expression on recently activated non-regulatory T cells has been observed. Neuropilin-1 has been used as a marker of recent thymic emigrants in the mouse iNKT cell population. It has been shown that Neuropilin-1 forms a complex with TGF beta receptors, activating the latent form of TGF beta (LAP-TGF beta 1) and augmenting canonical Smad2/3 signaling.

This 3DS304M antibody will recognize formaldehyde-fixed as well as methanol-treated epitopes.

Applications Reported: This 3DS304M antibody has been reported for use in intracellular staining followed by flow cytometric analysis.

Applications Tested: This 3DS304M antibody has been tested by intracellular staining and flow cytometric analysis of mouse splenocytes using the Foxp3/Transcription Factor Staining Buffer Set (cat. 00-5523) and protocol. Please refer to Best Protocols: Protocol B: One step protocol for (nuclear) intracellular proteins located under the Resources Tab online. This can be used at less than or equal to 0.5 µg per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in

a final volume of 100 µL. Cell number should be determined empirically but can range from 10^5 to 10^8 cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

PE-eFluor® 610 can be excited with laser lines from 488-561 nm and emits at 607 nm. We recommend using a 610/20 band pass filter (equivalent to PE-Texas Red®). Please make sure that your instrument is capable of detecting this fluorochome.

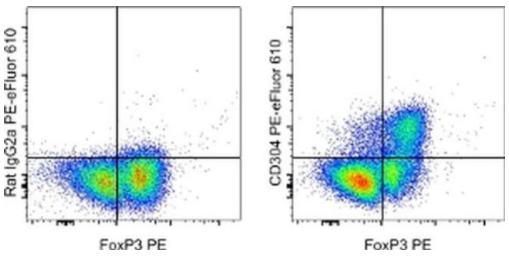
Light sensitivity: This tandem dye is sensitive to photo-induced oxidation. Please protect this vial and stained samples from light.

Fixation: Samples can be stored in IC Fixation Buffer (cat. 00-8222) (100 µL of cell sample + 100 µL of IC Fixation Buffer) or 1-step Fix/Lyse Solution (cat. 00-5333) for up to 3 days in the dark at 4°C with minimal impact on brightness and FRET efficiency /compensation. Some generalizations regarding fluorophore performance after fixation can be made, but clone specific performance should be determined empirically.

Excitation: 488-561 nm; Emission: 607 nm; Laser: Blue Laser, Green Laser, Yellow-Green Laser.

Filtration: 0.2 µm post-manufacturing filtered.

Product Images For CD304 (Neuropilin-1) Monoclonal Antibody (3DS304M), PE-eFluor™ 610, eBioscience™



CD304 (Neuropilin-1) Antibody (61-3041-82) in Flow
Staining of mouse splenocytes with Anti-Mouse CD4 eFluor® 450 (Product # 48-0042-82) and 0.25 µg of Rat IgG2a K Isotype Control PE-eFluor® 610 (Product # 61-4321-82) (left) or 0.25 µg of Anti-Mouse CD304 (Neuropilin-1) PE-eFluor® 610 (right) followed by intracellular staining with Anti-Mouse/Rat Foxp3 PE (Product # 12-5773-82) using the Foxp3/Transcription Factor Staining Buffer Set (Product # 00-5523-00) and protocol. Viable CD4+ lymphocytes, as determined by Fixable Viability Dye eFluor® 780 (Product # 65-0865-14), were used for analysis.

2 References

Flow Cytometry (2)

Cell reports

Brown adipose tissue involution associated with progressive restriction in progenitor competence.

"Published figure using CD304 (Neuropilin-1) monoclonal antibody (Product # 61-3041-82) in Flow Cytometry"

Authors: Huang Z,Zhang Z,Moazzami Z,Heck R,Hu P,Nanda H,Ren K,Sun Z,Bartolomucci A,Gao Y,Chung D,Zhu W, Shen S,Ruan HB

Year
2022

Immunity

A distal Foxp3 enhancer enables interleukin-2 dependent thymic Treg cell lineage commitment for robust immune tolerance.

"61-3041-82 was used in Flow cytometry/Cell sorting to investigate how STAT5 acts directly on the Foxp3 locus to promote its expression."

Authors: Dikiy S,Li J,Bai L,Jiang M,Janke L,Zong X,Hao X,Hoyos B,Wang ZM,Xu B,Fan Y,Rudensky AY,Feng Y

Year
2021

Species
Mouse