

Technical Data Sheet

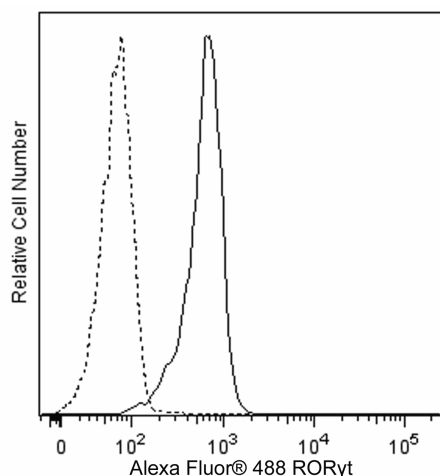
Alexa Fluor® 488 Mouse Anti-Human ROR γ t

Product Information

Material Number:	563621
Alternate Name:	ROR γ t; ROR gamma t; RORC; NR1F3; RORG; RZRG; TOR; RZR-GAMMA
Size:	50 tests
Vol. per Test:	5 μ l
Clone:	Q21-559
Immunogen:	Human ROR γ t Recombinant Protein
Isotype:	Mouse IgG2b, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA and \leq 0.09% sodium azide.

Description

The Q21-559 monoclonal antibody recognizes ROR gamma t (ROR γ t), an isoform of ROR gamma (ROR γ). ROR γ t is a DNA-binding transcription factor that is encoded by the *RORC* (RAR-related orphan receptor C) gene. It belongs to the ROR/RZR orphan nuclear receptor family. Two protein isoforms are produced from the *RORC* gene by alternative splicing: ROR γ or ROR γ t. The ROR γ isoform is expressed in many tissues, including thymus, lung, liver, kidney, muscle, and brown fat. However the tissue distribution of the second isoform ROR γ t is highly restricted to the thymus where it is expressed exclusively in immature CD4+CD8+ thymocytes and in peripheral Th17 and LTi cells. ROR γ t reportedly functions as an essential transcription factor for the development of secondary lymphoid tissues. It also plays an important regulatory role in thymopoiesis and effector T cell differentiation, especially for Th17 cells.



Flow cytometric analysis of human ROR γ t expression in human SR cells. Cells from the human SR cell line (ATCC CRL-2262) were fixed and permeabilized using the BD Pharmingen™ Transcription Factor Buffer Set (Cat. No. 562574/562725) and then stained with either Alexa Fluor® 488 Mouse IgG2b, κ Isotype Control (Cat. No. 558716; dashed line histogram) or Alexa Fluor® 488 Mouse Anti-Human ROR γ t antibody (Cat. No. 563621; solid line histogram). The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of intact cells. Flow cytometric analysis was performed using a BD™ LSR II Flow Cytometer System.

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated to Alexa Fluor® 488 under optimum conditions, and unreacted Alexa Fluor® 488 was removed.

Application Notes

Application

Intracellular staining (flow cytometry)	Routinely Tested
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Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
562574	Transcription Factor Buffer Set	100 tests	(none)
562725	Transcription Factor Buffer Set	25 tests	(none)
558716	Alexa Fluor® 488 Mouse IgG2b, κ Isotype Control	50 tests	27-35

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Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1×10^6 cells in a 100- μ l experimental sample (a test).
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. An isotype control should be used at the same concentration as the antibody of interest.
4. Please refer to www.bdbiosciences.com/pharming/en/protocols for technical protocols.
5. The Alexa Fluor®, Pacific Blue™, and Cascade Blue® dye antibody conjugates in this product are sold under license from Molecular Probes, Inc. for research use only, excluding use in combination with microarrays, or as analyte specific reagents. The Alexa Fluor® dyes (except for Alexa Fluor® 430), Pacific Blue™ dye, and Cascade Blue® dye are covered by pending and issued patents.
6. Alexa Fluor® 488 fluorochrome emission is collected at the same instrument settings as for fluorescein isothiocyanate (FITC).
7. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
8. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
9. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.

References

Acosta-Rodriguez EV, Rivino L, Geginat J, Jarrossay D, Gattorno M, Lanzavecchia A, Sallusto F, Napolitani G. Surface phenotype and antigenic specificity of human interleukin 17-producing T helper memory cells. *Nat Immunol.* 2007; 8(6):639-646. (Biology)

Bechtel S, Rosenfelder H, Duda A, et al. The full-ORF clone resource of the German cDNA Consortium. *BMC Biochem.* 2007; 8:399-410. (Biology)

Crellin NK, Trifari S, Kaplan CD, Cupedo T, Spits H. Human NKp44+IL-22+ cells and LTI-like cells constitute a stable RORC+ lineage distinct from conventional natural killer cells. *J Exp Med.* 2010; 207(2):281-290. (Biology)

Hirose T, Smith RJ, Jetten AM. ROR gamma: the third member of ROR/RZR orphan receptor subfamily that is highly expressed in skeletal muscle. *Biochim Biophys Acta.* 1994; 205(3):1976-1983. (Biology)

Jetten AM. Retinoid-related orphan receptors (RORs): critical roles in development, immunity, circadian rhythm, and cellular metabolism. *Nucl Recept Signal.* 2009; 7:1-32. (Biology)

Zielinski CE, Mele F, Aschenbrenner D, Jarrossay D, Ronchi F, Gattorno M, Monticelli S, Lanzavecchia A, Sallusto F. Pathogen-induced human TH17 cells produce IFN-gamma or IL-10 and are regulated by IL-1beta. *Nature.* 2012; 484(7395):514-518. (Biology)

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