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Product datasheet

Alexa Fluor® 647 Anti-PD1 antibody [NAT105] ab220301

★★★★★ 1 Abreviews 1 References 2 Images

Overview

Product name	Alexa Fluor® 647 Anti-PD1 antibody [NAT105]
Description	Alexa Fluor® 647 Mouse monoclonal [NAT105] to PD1
Host species	Mouse
Conjugation	Alexa Fluor® 647. Ex: 652nm, Em: 668nm
Specificity	This antibody recognizes human PD-1, a checkpoint protein expressed by T cells that is involved in the control of immune cell responses.
Tested applications	**Suitable for:** IHC-P, Flow Cyt (Intra)
Species reactivity	**Reacts with:** Human
Immunogen	Tissue, cells or virus corresponding to Human PD1. YT cells (human T/NK cell Leukemia) Database link: **Q15116**
Positive control	IHC-P: normal human tonsil tissue sections Flow Cyt (intra): MOLT4 cells.
General notes	Alexa Fluor® is a registered trademark of Molecular Probes, Inc, a Thermo Fisher Scientific Company. The Alexa Fluor® dye included in this product is provided under an intellectual property license from Life Technologies Corporation. As this product contains the Alexa Fluor® dye, the purchase of this product conveys to the buyer the non-transferable right to use the purchased product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). As this product contains the Alexa Fluor® dye the sale of this product is expressly conditioned on the buyer not using the product or its components, or any materials made using the product or its components, in any activity to generate revenue, which may include, but is not limited to use of the product or its components: in manufacturing; (ii) to provide a service, information, or data in return for payment (iii) for therapeutic, diagnostic or prophylactic purposes; or (iv) for resale, regardless of whether they are sold for use in research. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, 5781 Van Allen Way, Carlsbad, CA 92008 USA or **outlicensing@thermofisher.com**. 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. 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

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. Avoid freeze / thaw cycle. Store In the Dark.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: PBS, 1% BSA, 30% Glycerol (glycerin, glycerine)
Purity	Immunogen affinity purified
Clonality	Monoclonal
Clone number	NAT105
Isotype	IgG1
Light chain type	kappa

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab220301 in the following tested applications.

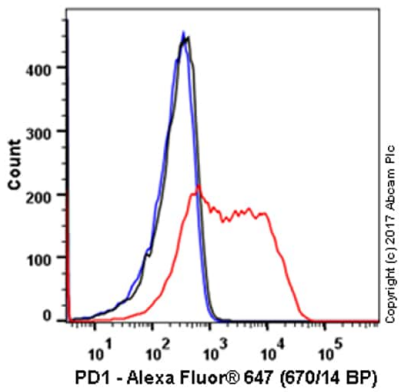
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P	★★★★★ (1)	1/50. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
Flow Cyt (Intra)		1/500.

Target

Function	Possible cell death inducer, in association with other factors.
Involvement in disease	Genetic variation in PDCD1 is associated with susceptibility to systemic lupus erythematosus type 2 (SLEB2) [MIM:605218]. Systemic lupus erythematosus is a chronic, inflammatory and often febrile multisystemic disorder of connective tissue. It affects principally the skin, joints, kidneys and serosal membranes. It is thought to represent a failure of the regulatory mechanisms of the autoimmune system.
Sequence similarities	Contains 1 Ig-like V-type (immunoglobulin-like) domain.
Developmental stage	Induced at programmed cell death.
Cellular localization	Membrane.

Images

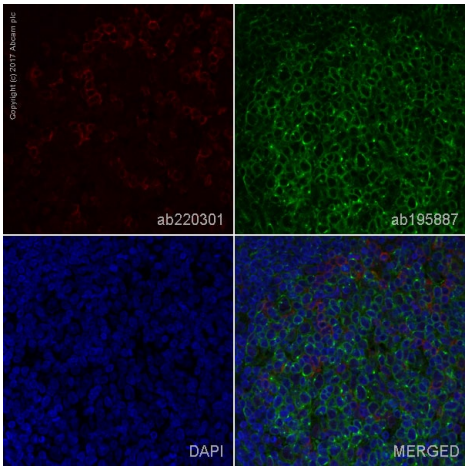


Flow Cytometry (Intracellular) - Alexa Fluor® 647 Anti-PD1 antibody [NAT105] (ab220301)

Overlay histogram showing MOLT4 cells stained with ab220301 (red line). The cells were incubated in 1x PBS / 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (ab220301, 1/500 dilution) for 30 min at 22°C.

Isotype control antibody (black line) was Mouse IgG1 (monoclonal) Alexa Fluor® 647 used at the same concentration and conditions as the primary antibody. Unlabelled sample (blue line) was also used as a control.

Acquisition of >5,000 events were collected using a 40 mW Red laser (640nm) and 670/14 bandpass filter.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Alexa Fluor® 647 Anti-PD1 antibody [NAT105] (ab220301)

IHC image of PD1 staining in a section of formalin-fixed paraffin-embedded normal human tonsil*.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6) in a Biocare Medical NxGen pressure cooker using retrieval settings of 110^{O}C for 8 minutes. Non-specific protein-protein interactions were then blocked in TBS containing 0.025% (v/v) Triton X-100, 0.3M (w/v) glycine and 1% (w/v) BSA for 1h at room temperature. The section was then incubated overnight at +4°C in TBS containing 0.025% (v/v) Triton X-100 and 1% (w/v) BSA with ab220301 at 1/50 dilution (shown in red) and counterstained using **ab195887**, Mouse monoclonal to alpha Tubulin (Alexa Fluor® 488), at 1/250 dilution (shown in green). Nuclear DNA was labelled with DAPI (shown in blue). The section was then mounted using Fluoromount®.

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

For other IHC staining systems (automated and non-automated), customers should optimize variable parameters such as antigen retrieval conditions, antibody concentrations and incubation times.

*Tissue obtained from the Human Research Tissue Bank, supported by the NIHR Cambridge Biomedical Research Centre.

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