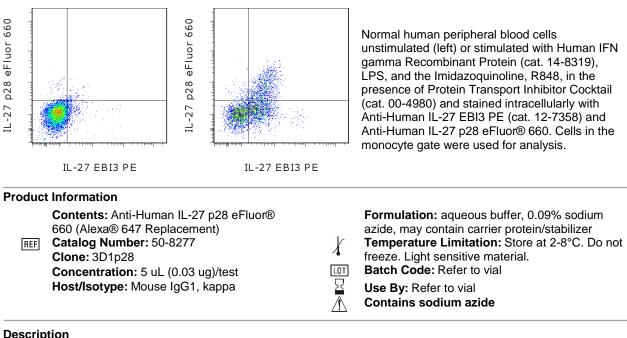


Anti-Human IL-27 p28 eFluor® 660 (Alexa® 647 Replacement)

Catalog Number: 50-8277

Also known as: Interleukin-27 subunit alpha, IL-27A, Interleukin-30 RUO: For Research Use Only. Not for use in diagnostic procedures.



Description

This 3D1p28 monoclonal antibody reacts with the human p28 subunit of IL-27. Interleukin-27 (IL-27) is a member of the IL-12 family, a subgroup of the IL-6 family of cytokines. It is a heterodimer of the subunits EBI3 (Epstein-Barr Virus Induced Gene 3), which is homologous to the p40 subunit shared by IL-12 and IL-23, and p28 (IL-30), which is homologous to p35. IL-27 is produced by activated dendritic cells and macrophages in response to TLR ligands and inflammatory cytokines. IL-27 has been shown to have both pro-inflammatory and anti-inflammatory effects. It influences the commitment of CD4+ T-cells toward the Th1 lineage by inducing the expression of the transcription factor T-bet and the upregulation of IL-12R beta2. Its anti-inflammatory functions include the suppression of Th2 and Th17 proliferation and differentiation.

The IL-27 receptor shares one subunit, gp130, with other members of the IL-6 family. The subunit WSX-1 (IL-27R alpha, TCCR) is unique to IL-27 and is believed to be the only part of the receptor that interacts with the cytokine. IL-27R activation leads to the phosphorylation of Jak/STAT proteins, with STAT1 and STAT3 being critical to the function of IL-27.

Recent evidence suggests that the p28 subunit may also be secreted independently of EBI3 and have functions distinct from the IL-27 heterodimer: it is believed to not only antagonize the activity of IL-27, but also inhibit signaling of other gp130 ligands, such as IL-6 and IL-11.

Applications Reported

This 3D1p28 antibody has been reported for use in intracellular staining followed by flow cytometric analysis.

Applications Tested

This 3D1p28 antibody has been pre-titrated and tested by intracellular staining followed by flow cytometric analysis. This can be used at 5 µL (0.03 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 10⁵ to 10⁸ cells/test.



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eFluor® 660 is a replacement for Alexa Fluor® 647. eFluor® 660 emits at 659 nm and is excited with the red laser (633 nm). Please make sure that your instrument is capable of detecting this fluorochome.

References

Stumhofer JS, Tait ED, Quinn WJ 3rd, Hosken N, Spudy B, Goenka R, Fielding CA, O'Hara AC, Chen Y, Jones ML, Saris CJ, Rose-John S, Cua DJ, Jones SA, Elloso MM, Grotzinger J, Cancro MP, Levin SD, Hunter CA. A Role for IL-27p28 as an antagonist of gp130-mediated signaling. Nat Immunol. 2010 Dec;11(12):1119-26.

Stumhofer JS and Hunter CA. Advances in understanding the anti-inflammatory properties of IL-27. Immunol Lett. 2008 May 15; 117(2): 123-30.

Yoshimura A, Yoshida H, Miyazaki Y, Kinjyo I, Ishibashi T, Yoshimura T, Takeda A, Hamano S. Two sided roles of IL-27: induction of Th1 differentiation on Naïve CD4+ T cells versus suppression of proinflammatory cytokine production including IL-23-induced IL-17 on activated CD4+ T cells partially through STAT3-dependent mechanism. J Immunol. 2006; 177: 5377-85.

Related Products

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