PRODUCT INFORMATION

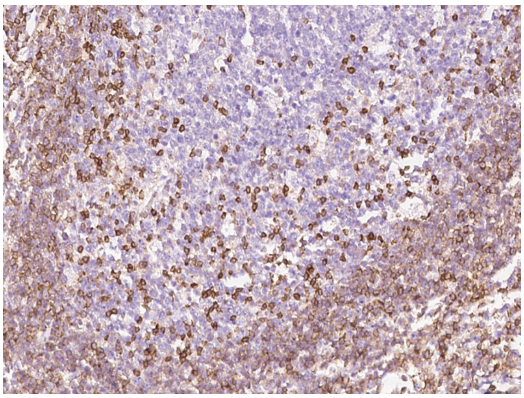
Interleukin-16 Monoclonal Antibody (Clone 55)

Item No. 33949

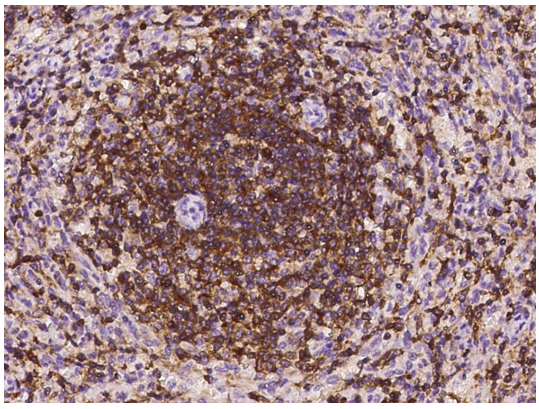
Overview and Properties

Contents:	This vial contains 50, 100, or 200 µl of protein A-purified monoclonal antibody.
Synonyms:	IL-16, LCF
Immunogen:	Recombinant human IL-16 protein
Cross Reactivity:	(+) IL-16
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-80°C (as supplied)
Stability:	≥1 year
Storage Buffer:	0.2 µm filtered solution in PBS
Clone:	55
Host:	Mouse
Isotype:	IgG1
Applications:	Immunohistochemistry (IHC); the recommended starting dilution is 1:200-1:2,000 for IHC. Other applications were not tested, therefore optimal working concentration/ dilution should be determined empirically.

Images



Immunohistochemical staining of formalin-fixed and paraffin-embedded human IL-16 in human tonsil tissue using Interleukin-16 Monoclonal Antibody (Clone 55) at a dilution of 1:1,000.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human IL-16 in human spleen tissue using Interleukin-16 Monoclonal Antibody (Clone 55) at a dilution of 1:1,000.

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Description

IL-16 is a cytokine that has roles as a T cell chemoattractant and modulator of T cell activation.[1,2] It is synthesized as a 631-amino acid precursor protein, precursor IL-16, that is cleaved by caspase-3 at serine 511 (Ser^{511}), which produces the N-terminal peptide, pro-IL-16, and the 121-amino acid C-terminal peptide, mature IL-6, both of which are biologically active.[2] Pro-IL-16 translocates to the nucleus, where it acts as a transcriptional repressor of S-phase kinase-associated protein 2 (Skp2), preventing cell cycle entry, whereas mature IL-16 is secreted upon antigen or pro-inflammatory cytokine stimulation and acts as a $CD4^+$ T cell chemoattractant.[2,3] Precursor IL-16 is constitutively expressed by $CD8^+$ or $CD4^+$ T cells.[3] Caspase-3-mediated cleavage of precursor IL-16 is constitutive in $CD8^+$ T cells, which store mature IL-16 in vesicles until antigen, mitogen, or vasoactive amine stimulation, whereas caspase-3 activation by mitogens or antigens is a prerequisite for precursor IL-16 processing in $CD4^+$ T cells. IL-16 production can also be induced by growth factor, cytokine, or mitogen stimulation in other leukocytes, including macrophages, dendritic cells, mast cells, and eosinophils. IL-16 has roles in numerous inflammatory conditions.[4] Serum IL-16 levels are increased in patients infected with severe acute respiratory syndrome coronavirus (SARS-CoV) or hepatitis C virus (HCV), and IL-16 levels are increased in the CNS or synovial fluid of patients with multiple sclerosis or rheumatoid arthritis, respectively. Cayman's Interleukin-16 Monoclonal Antibody (Clone 55) can be used for immunohistochemistry (IHC) applications. The antibody recognizes IL-16 from human samples.

References

1. Mathy, N.L., Scheuer, W., Lanzendörfer, M., *et al*. Interleukin-16 stimulates the expression and production of pro-inflammatory cytokines by human monocytes. *Immunology* **100(1)**, 63-69 (2000).
2. Richmond, J., Tuzova, M., Cruikshank, W., *et al*. Regulation of cellular processes by interleukin-16 in homeostasis and cancer. *J. Cell. Physiol.* **229(2)**, 139-147 (2014).
3. Cruikshank, W.W., Kornfeld, H., and Center, D.M. Interleukin-16. *J. Leukoc. Biol.* **67(6)**, 757-766 (2000).
4. Glass, W.G., Sarisky, R.T., and Del Vecchio, A.M. Not-so-sweet sixteen: The role of IL-16 in infectious and immune-mediated inflammatory diseases. *J. Interferon. Cytokine Res.* **26(8)**, 511-520 (2006).

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