

## Biotin anti-human IL-34 Antibody

<b>Catalog# / Size</b>	361401 / 50 µg 361402 / 500 µg
<b>Clone</b>	E033B8
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Interleukin 34, C16orf77
<b>Isotype</b>	Mouse IgG2a, λ
<b>Description</b>	Human IL-34 shares a sequence identity of 99.6%, 72% and 71% with chimpanzee, rat, and mouse IL-34, respectively, on the amino acid level. The IL-34 gene is syntenic in the human, chimpanzee, rat, and mouse genomes. IL-34 has no apparent consensus structural domain or motif, and does not share sequence homology with M-CSF; nevertheless, it binds to the CSFR. These two cytokines are not identical in biological activity and signal activation. IL-34 and CSF show an equivalent ability to support cell growth or survival. However, these cytokines are differing in their ability to induce the production of chemokines (MCP-1 and eotaxin-2) in primary macrophages, the morphological change in TF-1-fms cells, and the migration of J774A.1 cells. The use of monoclonal antibodies against the CSFR suggests differential domain binding of the receptor to IL-34 and CSF and as a result, different bioactivities and signal activation kinetics/strength are produced for these cytokines.

### Product Details

<b>Verified Reactivity</b>	Human
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Immunogen</b>	Recombinant human IL-34
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with biotin under optimal conditions.
<b>Concentration</b>	0.5 mg/ml
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">ELISA Detection - Quality tested</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by <a href="#">ELISA assay</a> . For ELISA detection applications, a concentration range of 0.5 - 2.0 µg/mL is recommended. To obtain a linear standard curve, serial dilutions of human IL-34 recombinant protein ranging from 5000 to 78 pg/mL are recommended for each ELISA plate. It is recommended that the reagent be titrated for optimal performance for each application.
<b>Application Notes</b>	<b>ELISA Detection:</b> The biotinylated E033E8 antibody is useful as the detection antibody in a sandwich ELISA assay, when used in conjunction with the purified E0320E7 antibody (Cat. No. 361301) as the capture antibody and recombinant human IL-34 (Cat. No. 577909) as the standard.  <b>Note:</b> For testing human IL-34 in serum, plasma or cell culture supernatant, LEGEND MAX™ Human IL-34 ELISA Kit with Pre-coated Plates (Cat. No. 439607 & 439608) are specially developed and recommended.
<b>Product Citations</b>	1. Muliaditan T, <i>et al.</i> 2021. Cell Rep Med. 2:100457. <a href="#">PubMed</a> 2. Han N, <i>et al.</i> 2021. STAR Protocols. 2(2):100460. <a href="#">PubMed</a>
<b>RRID</b>	AB_2563034 (BioLegend Cat. No. 361401) AB_2563035 (BioLegend Cat. No. 361402)

## Antigen Details

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<b>Structure</b>	Secreted glycoprotein, homodimer
<b>Distribution</b>	IL-34 mRNA is expressed in many different tissues including: spleen, heart, brain, lung, liver, kidney, thymus, testes, ovary, small intestine, prostate, and colon
<b>Function</b>	IL-34 increases monocyte viability, induces macrophage proliferation, and synergizes with other cytokines to generate macrophages and osteoclasts from cultured progenitors. IL-34 promotes the formation of the colony forming unit-macrophage (CFU-M) in human bone marrow culture. IL-34 supports RANKL-induced osteoclastogenesis by promoting the adhesion and proliferation of osteoclast progenitors. Human IL-34 promotes osteoclast differentiation from peripheral blood mononucleated cells. In addition, systematic administration of IL-34 to mouse increases the number of CD11b+ cells and reduces bone mass. IL-1 $\beta$ and TNF- $\alpha$ induce the expression of interleukin-34 mRNA in osteoblasts. IL-34 is also induced in macrophages infected with equine infectious anemia virus (EIAV).
<b>Interaction</b>	Macrophages, monocytes, myeloid cells
<b>Ligand/Receptor</b>	CSF-1R
<b>Biology Area</b>	Cell Biology, Immunology
<b>Molecular Family</b>	Cytokines/Chemokines
<b>Antigen References</b>	<ol style="list-style-type: none"><li>1. Clanchy FI, <i>et al.</i> 2006. <i>J. Leuko. Biol.</i> 79:757.</li><li>2. Lin H, <i>et al.</i> 2008. <i>Science</i> 320:807.</li><li>3. Chihara T, <i>et al.</i> 2010. <i>Cell. Death Differ.</i> 17:1917.</li><li>4. Wei S, <i>et al.</i> 2010. <i>J. Leuko. Biol.</i> 88:495.</li><li>5. Eda H, <i>et al.</i> 2011. <i>Rheumatol. Int.</i> 31:1525.</li></ol>
<b>Gene ID</b>	<a href="#">146433</a>

## Related Protocols

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[Active Protocols: Sandwich ELISA - Video](#)

[Sandwich ELISA Protocol](#)

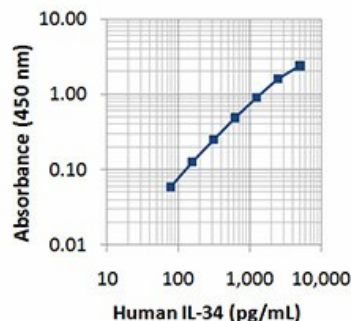
## Other Formats

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Biotin anti-human IL-34

## Product Data

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