

## Purified anti-human IL-15 Antibody

<b>Catalog# / Size</b>	515001 / 50 µg 515002 / 500 µg
<b>Clone</b>	BH1509
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Interleukin-15 (IL-15), MGC9721
<b>Isotype</b>	Mouse IgG1, κ
<b>Description</b>	<p>Interleukin-15 (IL-15) was discovered in supernatant from simian kidney epithelial cell line CV-1/EBNA, as a soluble factor capable of supporting proliferation of the IL-2-dependent cell line, CTLL-2 (1). IL-15 is a regulatory cytokine that is produced by dendritic cells, epithelial cells, human stromal cell line (IMTLH), fibroblasts, and monocytes (2). It plays an important role in immune response and shares many functions with IL-2, for example, it stimulates the proliferation of activated T cells (1, 2), NK cells (3) and B cells, and it induces immunoglobulin synthesis by B cells stimulated by anti-IgM or CD40 ligand (4). In addition, IL-15 promotes the development of dendritic cells (5), activates human neutrophils (6, 7) and induces the production of proinflammatory cytokines from macrophages (8). IL-15 acts as a bridge between innate and adaptive immunity because of its diverse roles in the immune system. IL-15 binds to heterotrimeric receptors composed of IL-15Rα, IL-15Rβ, and IL-15Rγc. IL-15 shares with IL-2 the receptor chains β and γc. IL-15 is normally not secreted in soluble form but is held on the cell surface bound to a unique receptor, IL-15Rα, especially on dendritic cells. Cell-bound IL-15 then is presented in trans to T cells and NK cells and is recognized by the γc receptor on these cells; such recognition maintains cell survival and intermittent proliferation (9).</p>

### Product Details

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<b>Verified Reactivity</b>	Human
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Immunogen</b>	<i>E. coli</i> - expressed, recombinant human IL-15
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
<b>Preparation</b>	The antibody was purified by affinity chromatography.
<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>Application</b>	<a href="#">ELISA Capture - Quality tested</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by <a href="#">ELISA assay</a> . For ELISA capture applications, a concentration range of 1-4 µg/ml is recommended. To obtain a linear standard curve, serial dilutions of IL-15 recombinant protein ranging from 500 to 7.8 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>	The purified BH1509 antibody is useful as the capture antibody in a sandwich ELISA, when used in conjunction with biotinylated BH1543 antibody (Cat. No. 515104) as the detecting antibody and recombinant human IL-15 (Cat. No. 570309) as the standard.
<b>Product Citations</b>	<ol style="list-style-type: none"><li>1. Ye G, <i>et al.</i> 2021. Stem Cell Reports. 16:926. <a href="#">PubMed</a></li><li>2. Mishra A, <i>et al.</i> 2021. Cell. 184(13):3394-3409.e20. <a href="#">PubMed</a></li></ol>
<b>RRID</b>	AB_2561318 (BioLegend Cat. No. 515001) AB_2561319 (BioLegend Cat. No. 515002)

## Antigen Details

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<b>Structure</b>	13 kD single non-glycosylated polypeptide
<b>Distribution</b>	T cells, B cells, dendritic cells, monocytes, and macrophages
<b>Function</b>	IL-15 stimulates the proliferation of activated T cells, NK cells, and B cells, inducing immunoglobulin synthesis by B cells stimulated by anti-IgM or CD40 ligand. In addition, IL-15 promotes the development of dendritic cells, activates human neutrophils, and induces the production of proinflammatory cytokines from macrophages.
<b>Interaction</b>	T lymphocytes, NK cells
<b>Ligand/Receptor</b>	IL-15R $\alpha$ , IL-15R $\beta$ and IL-15 $\gamma$ c
<b>Cell Type</b>	T cells, B cells, Dendritic cells, Monocytes, Macrophages
<b>Biology Area</b>	Immunology, Innate Immunity
<b>Molecular Family</b>	Cytokines/Chemokines
<b>Antigen References</b>	<ol style="list-style-type: none"><li>1. Grabstein K, <i>et al.</i> 1994. <i>Science</i> 264:965.</li><li>2. Ma A, <i>et al.</i> 2006. <i>Annu. Rev. Immunol.</i> 24:657.</li><li>3. Meresse B, <i>et al.</i> 2004. <i>Immunity</i> 21:357.</li><li>4. Armitage RJ, <i>et al.</i> 1995. <i>J. Immunol.</i> 154:483.</li><li>5. Pulendran B, <i>et al.</i> 2004. <i>Eur. J. Immunol.</i> 34:66.</li><li>6. Bouchard A, <i>et al.</i> 2004. <i>J. Leuko. Biol.</i> 75:893.</li><li>7. Ratthe C, <i>et al.</i> 2004. <i>J. Leuko. Biol.</i> 76:162.</li><li>8. Tang F, <i>et al.</i> 2008. <i>Cell Immunol.</i> 5:189.</li><li>9. Rubinstein MP, <i>et al.</i> 2006. <i>P. Natl. Acad. Sci. USA</i> 103:9166.</li></ol>
<b>Gene ID</b>	<a href="#">3600</a>

## Related Protocols

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

[Sandwich ELISA Protocol](#)

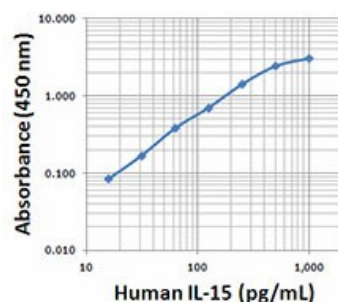
## Other Formats

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Purified anti-human IL-15

## Product Data

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