

Biotin anti-human IL-15 Antibody

Catalog# / Size	515103 / 50 µg 515104 / 500 µg
Clone	BH1543
Regulatory Status	RUO
Other Names	Interleukin-15 (IL-15), MGC9721
Isotype	Mouse IgG1, κ
Description	<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

Verified Reactivity	Human
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	<i>E. coli</i> - expressed, recombinant human IL-15
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography and conjugated with biotin under optimal conditions.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C. Do not freeze.
Application	ELISA Detection - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by ELISA assay . For use as an ELISA detection antibody, a concentration range of 0.5-2.0 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.
Application Notes	The biotinylated BH1543 antibody is useful as a detection antibody for a sandwich ELISA assay, when used in conjunction with purified BH1509 (Cat. No. 515002) antibody as the capture antibody and recombinant human IL-15 (Cat. No. 570309) as the standard.
RRID	AB_2561320 (BioLegend Cat. No. 515103) AB_2561321 (BioLegend Cat. No. 515104)

Antigen Details

Structure	13 kD single non-glycosylated polypeptide
Distribution	T cells, B cells, dendritic cells, monocytes, and macrophages
Function	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.
Interaction	T lymphocytes, NK cells
Ligand/Receptor	IL-15R α , IL-15R β and IL-15 γ c
Cell Type	T cells, B cells, Dendritic cells, Monocytes, Macrophages
Biology Area	Immunology, Innate Immunity
Molecular Family	Cytokines/Chemokines
Antigen References	<ol style="list-style-type: none"> 1. Grabstein K, <i>et al.</i> 1994. <i>Science</i> 264:965. 2. Ma A, <i>et al.</i> 2006. <i>Annu. Rev. Immunol.</i> 24:657. 3. Meresse B, <i>et al.</i> 2004. <i>Immunity</i> 21:357. 4. Armitage RJ, <i>et al.</i> 1995. <i>J. Immunol.</i> 154:483. 5. Pulendran B, <i>et al.</i> 2004. <i>Eur. J. Immunol.</i> 34:66. 6. Bouchard A, <i>et al.</i> 2004. <i>J. Leuko. Biol.</i> 75:893. 7. Ratthe C, <i>et al.</i> 2004. <i>J. Leuko. Biol.</i> 76:162. 8. Feng T, <i>et al.</i> 2008. <i>Cell Immunol.</i> 5:189. 9. Rubinstein MP, <i>et al.</i> 2006. <i>P. Natl. Acad. Sci. USA</i> 103:9166.
Gene ID	3600

Related Protocols

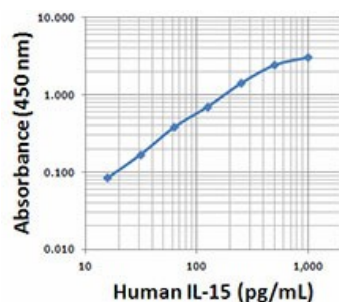
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Other Formats

Biotin anti-human IL-15

Product Data



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