ProductInformation

ANTI-INTERLEUKIN 16 (IL-16), HUMAN
Developed in Goat, Affinity Isolated Antibody

Product Number **I 0529**

Product Description

Anti-Human Interleukin 16 (IL-16) is developed in goat using a purified recombinant human interleukin 16 expressed in *E. coli* as immunogen. Affinity isolated antigen specific antibody is obtained from goat anti-IL-16 antiserum by immuno-specific purification which removes essentially all goat serum proteins, including immunoglobulins, which do not specifically bind to the peptide.

Anti-Human Interleukin 16 recognizes recombinant human IL-16 by various immunochemical techniques including immunoblotting and ELISA.

Interleukin 16 (IL-16), also known as lymphocyte chemoattractant factor (LCF), [1] is a proinflammatory cytokine that is chemotactic for CD4+ T lymphocytes, monocytes, and eosinophils. It was originally identified as a CD8+ T-cell-derived chemoattractant for CD4+ cells. The biologically active form of IL-16, originally proposed to be a homotetramer of 14 kDa chains with 130 amino acid residues, [2] is now believed to have been derived from the C terminus of the precursor molecule. Subsequently, IL-16 is synthesized as a precursor molecule (pro-IL-16) of approximately 68 kDa and 631 amino acid residues lacking a signal peptide.[3, 4] The sequence and structure of IL-16 is conserved across species. Structurally and functionally, particularly in the C-terminal region, human and mouse IL-16 share approximately 82 % similarity.[5]

In addition to inducing chemotaxis, IL-16 upregulates the IL-2 receptor [1] and upregulates HLA-DR [6] expression. It also inhibits T cell receptor (TCR)/CD3-dependent activation, [7] and suppresses HIV-1 replication *in vitro*.[8] IL-16 expression has been linked to inflammatory processes in various diseases and conditions. CD4 functions as a signal-transducing receptor for IL-16. The expression of CD4 is necessary for mediating IL-16 functions.[1, 9]

Sources of IL-16 include epithelial cells, mast cells, T lymphocytes (CD4+ and CD8+), macrophages, synovial fibroblasts, and eosinophils. IL-16 precursor proteins have been detected in the lysates of various cells including mitogen-stimulated PBMCs (peripheral blood mononuclear cells) and also in tissues such as spleen, thymus, lymph nodes, bone marrow, and cerebellum. The gene for IL-16 maps to chromosome 15 in humans.[10]

Reagent

Anti-human IL-16 is supplied as 100 µg of antiserum lyophilized from a 0.2 µm filtered solution of phosphate buffered saline (PBS).

Preparation Instructions

To one vial of lyophilized powder, add 1 ml of sterile phosphate buffered saline (PBS) to produce a 0.1 mg/ml stock solution of antibody.

Storage/Stability

Prior to reconstitution, store at –20 °C. Reconstituted product may be stored at 2 °C to 8 °C for at least one month. For prolonged storage, freeze in working aliquots at –20 °C. Avoid repeated freezing and thawing. Do not store in a frost-free freezer.

Product Profile

For immunoblotting, a working concentration of 0.1 to 0.2 µg/ml antibody is recommended. The detection limit for recombinant human IL-16 is approximately 0.5 ng/lane under non-reducing and reducing conditions.

For ELISAs, a working concentration of 0.5 to 1.0 µg/ml antibody is recommended. The detection limit for recombinant human IL-16 is approximately 0.06 ng/well.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working dilutions by titration test.

Endotoxin level is < 10 ng/mg antibody as determined by the LAL (Limulus amebocyte lysate) method.

References

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KAA 05/01