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Datasheet for ABIN2666762

IL-32 alpha Protein (AA 2-131, N-Term)

Overview

Quantity:	10 µg
Target:	IL-32 alpha (IL32A)
Protein Characteristics:	AA 2-131, N-Term
Origin:	Human
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Biological Activity:	Active
Application:	Flow Cytometry (FACS)

Product Details

Purity:	> 90 %, as determined by Coomassie stained SDS-PAGE.
Sterility:	0.22 µm filtered
Endotoxin Level:	Less than 0.01 ng per µg cytokine as determined by the LAL method.

Target Details

Target:	IL-32 alpha (IL32A)
Alternative Name:	IL-32 alpha (IL32A Products)
Background:	IL-32 is a proinflammatory cytokine with both extracellular and intracellular functions. IL-32 was originally identified as a natural killer transcript 4 (NK4). Several isoforms of IL-32 have been identified, and IL-32α is the most abundant. Overexpression of IL-32α in myeloid cell lines enhances natural killer cell-mediated killing, and IL-32 expression can be induced by IL-18 in NK

Target Details

cells. IL-32 α can be released by some epithelial cell lines in response to INF- γ , TNF- α , and IL-1 β . IL-32 can induce production of various cytokines including TNF- α , IL-1 β , IL-8 and IL-6 through NF- κ B and p38 MAPK activation. IL-32 works synergistically with IL-17 to induce osteoclast differentiation. Recombinant IL-32 α can induce macrophage apoptosis in the presence of M. tuberculosis. Intracellular IL-32 α increases IL-6 production by interacting with PKC ϵ and STAT3, which not only increases STAT3 phosphorylation but also enhances STAT3 recruitment to the IL-6 promoter. IL-32 can synergize with NOD1 and NOD2 ligands to induce IL-1 β and IL-6 through the caspase I-dependent pathway. IL-32 has been associated with pathogenesis of many chronic inflammatory diseases including rheumatoid arthritis and ulcerative colitis. IL-32 is highly expressed in various cancers including gastric and pancreatic cancer. Studies have suggested that IL-32 can function as an angiogenic factor. In addition, IL-32 α expression in liver cells is increased following progression of many liver diseases. Also, IL-32 is involved in the immune response to many viruses including HIV, influenza A, hepatitis B, and papillomavirus.

Molecular Weight:	The 131 amino acid recombinant protein has a predicted molecular mass of approximately 14.9 kDa. The DTT-reduced and non-reduced protein migrates at approximately 20 kDa by SDS-PAGE. The predicted N-terminal amino acid is Methione.
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Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.
Comment:	Biological activity: The ED50 is 2 - 8 μ g/ml, corresponding to a specific activity 1.25 - 5 x 10 ² units/mg, as determined by a dose-dependent induction of human TNF- α in PMA-stimulated THP-1 cells.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Reconstitution:	For maximum results, quick spin vial prior to opening. Stock solutions should be prepared at no less than 10 μ g/mL in sterile buffer (PBS, HPBS, DPBS, and EBSS) containing carrier protein such as 1 % BSA or HSA. After dilution, the cytokine can be stored between 2 °C and 8 °C for one month or from -20 °C to -70 °C for up to 3 months.
Buffer:	0.22 μ m filtered protein solution is in PBS, pH 7.4, with 10 mM DTT.
Preservative:	Dithiothreitol (DTT)

Handling

Precaution of Use:	This product contains Dithiothreitol (DTT): a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Handling Advice:	Avoid repeated freeze/thaw cycles.
Storage:	-20 °C
Storage Comment:	Unopened vial can be stored between 2°C and 8°C for three months, at -20°C for six months, or at -70°C for one year.