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IL-20

Catalog # PVGS1068

Product Information

Primary Accession	Q9NYY1
Species	Human
Sequence	Leu25-Glu176, expressed with an N-terminal Met
Purity	> 95% as analyzed by SDS-PAGE > 95% as analyzed by HPLC
Endotoxin Level	
Biological Activity	Fully biologically active when compared to standard. The ED_{50} as determined by a cell proliferation assay using human IL-20Rα and human IL-20Rβ co-transfected murine BaF3 pro-B cells is less than 0.5 ng/ml, corresponding to a specific activity of > 2.0×10^6 IU/mg.
Expression System	E. coli
Theoretical Molecular Weight	17.6 kDa
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS, pH 7.2, with trehalose.
Reconstitution	It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/ml.
Storage & Stability	Upon receiving, this product remains stable for up to 6 months at -70°C or -20°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. Avoid repeated freeze-thaw cycles.

Additional Information

Gene ID	50604
Other Names	Interleukin-20, IL-20, Cytokine Zcyto10, IL20, ZCYTO10
Target Background	IL-20 is a member of the IL-10 family of regulatory cytokines which includes IL-10, IL-19, IL-20, IL-22, IL-24 and IL-26. Members of this family share partial homology in their amino acid sequences but they are dissimilar in their biological functions. IL-20 is a hematopoietic growth factor capable of stimulating colony formation by CD34+ multipotential progenitors, but not by other progenitor cells. IL-20 signals through a receptor system composed of type I IL-20R-α and type II IL-20R-β. Over-expression of IL-20 in keratinocytes expressing both receptor subunits has been implicated in the induction of inflammatory skin disease.

Protein Information

Name	IL20
Synonyms	ZCYTO10
Function	Pro-inflammatory and angiogenic cytokine mainly secreted by monocytes and skin keratinocytes that plays crucial roles in immune responses, regulation of inflammatory responses, hemopoiesis, as well as epidermal cell and keratinocyte differentiation (PubMed:17277128, PubMed:34403503). Enhances tissue remodeling and wound-healing activities and restores the homeostasis of epithelial layers during infection and inflammatory responses to maintain tissue integrity (PubMed:17277128). Affects multiple actin-mediated functions in activated neutrophils leading to inhibition of phagocytosis, granule exocytosis, and migration (PubMed:28424238). Exert its effects via the type I IL-20 receptor complex consisting of IL20RA and IL20RB (PubMed:11706020). Alternatively, can mediate its activity through a second receptor complex called type II IL-20 receptor complex composed of IL22RA1 and IL20RB (PubMed:11564763). Acts as an arteriogenic and vascular remodeling factory by activating a range of signaling processes including phosphorylations of JAK2 and STAT5 as well as activation of the serine and threonine kinases AKT and ERK1/2 (By similarity). Alternatively, can activate STAT3 phosphorylation and transcriptional activity in a JAK2, ERK1/2 and p38 MAPK-dependent manner in keratinocytes (PubMed:23614738).
Cellular Location	Secreted.
Tissue Location	Expressed in most tissues and five major cell types: epithelial cells (primarily skin, buccal mucosa, tongue, nasal mucosa, lung, ureter, breast, prostate, fallopian tube, and adrenal gland), myoepithelial cells (mainly prostate), endothelial cells (mainly in small vessels or capillaries), macrophages, and skeletal muscle. Isoform 2 was detected in the lung tissue only