Animal-Free IL-6 Protein, Pig (His)

Cat. No.:	HY-P700249AF
Synonyms:	Interleukin-6; Interleukin HP-1; BSF2; HSF; IFNB2
Species:	Pig
Source:	E. coli
Accession:	P26893 (R31-M212)
Gene ID:	399500
Molecular Weight:	Approximately 21.9 kDa

PROPERTIES

AA Sequence	M G R L E E D A K G D A T S D K M L F T S P D K T E E L I K Y I L G K I S A M R K E M C E K Y E K C E N S K E V L A E N N L N L P K M A E K D G C F Q S G F N Q E T C L M R I T T G L V E F Q I Y L D Y L Q K E Y E S N K G N V E A V Q I S T K A L I Q T L R Q K G K N P D K A T T P N P T T N A G L L D K L Q S Q N E W M K N T K I I L I L R S L E D F L Q F S L R A I R I M
Appearance	Lyophilized powder.
Formulation	Lyophilized from a solution containing 1X PBS, p7.4.
Endotoxin Level	<0.1 EU per 1 μg of the protein by the LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US;may vary elsewhere.

DESCRIPTION

Background	IL-6 Protein is a versatile cytokine involved in various immune, regenerative, and metabolic processes. It exerts its effects by binding to IL6R, leading to the formation of a complex with the signaling subunit IL6ST/gp130, which activates the intracellular IL6-signaling pathway. This interaction can trigger different types of signaling, including 'classic signaling' through the membrane-bound IL6R and IL6ST, 'trans-signaling' through the binding of IL6 and soluble IL6R to IL6ST, and 'cluster signaling' through IL6:IL6R complexes on transmitter cells activating IL6ST receptors on neighboring receiver cells. IL-6 is crucial for the acute phase response, playing a role in host defense during infection and tissue injury. However, excessive IL-6 production is implicated in disease pathology. It is synthesized by myeloid cells like macrophages and dendritic cells in response to pathogen recognition through toll-like receptors (TLRs). In the adaptive immune response, IL-6

	is necessary for B cell differentiation into immunoglobulin-secreting cells and plays a significant role in the differentiation of CD4(+) T cell subsets. It is an essential factor for the development of T follicular helper (Tfh) cells, which are crucial for germinal-center formation, and for the induction of the Th17 lineage in naive CD4(+) T cells. Additionally, IL-6 is required for the proliferation and survival of myeloma cells and plasmablast cells.

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