

CHI3L1 Protein, Mouse (381a.a, HEK293, His)

Cat. No.:	HY-P76702
Synonyms:	Chitinase-3-Like protein 1; 39 kDa Synovial Protein; CGP-39; GP-39; hCGP-39; YKL-40
Species:	Mouse
Source:	HEK293
Accession:	Q61362-2 (Y22-A381)
Gene ID:	12654
Molecular Weight:	Approximately 40.83 kDa

PROPERTIES

AA Sequence	<pre> Y K L V C Y F T S W S Q Y R E G V G S F L P D A I Q P F L C T H I I Y S F A N I S S D N M L S T W E W N D E S N Y D K L N K L K T R N T N L K T L L S V G G W K F G E K R F S E I A S N T E R R T A F V R S V A P F L R S Y G F D G L D L A W L Y P R L R D K Q Y F S T L I K E L N A E F T K E V Q P G R E K L L L S A A L S A G K V A I D T G Y D I A Q I A Q H L D F I N L M T Y D F H G V W R Q I T G H H S P L F Q G Q K D T R F D R Y S N V N Y A V Q Y M I R L G A Q A S K L L M G I P T F G K S F T L A S S E N Q L G A P I S G E G L P G R F T K E A G T L A Y Y E I C D F L K G A E V H R L S N E K V P F A T K G N Q W V G Y E D K E S V K N K V G F L K E K K L A G A M V W A L D L D D F Q G T C Q P K E F F P L T N A I K D A L A </pre>
Biological Activity	Measured by the ability of the immobilized protein to support the adhesion of FaDu human squamous cell carcinoma cells. The ED ₅₀ for this effect is 3.232 µg/ml, corresponding to a specific activity is 309.4059 units/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4 or 20 mM PB, 150 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
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

CHI3L1 Protein is a carbohydrate-binding lectin that exhibits a specific preference for chitin. Although it lacks chitinase activity, it plays crucial roles in tissue remodeling and enables cells to adapt and respond to environmental changes. It is involved in various processes, such as T-helper cell type 2 (Th2) inflammatory response, IL-13-induced inflammation, regulation of allergen sensitization, modulation of inflammatory cell apoptosis, dendritic cell accumulation, and promotion of M2 macrophage differentiation. Furthermore, it facilitates the invasion of pathogenic enteric bacteria into the colonic mucosa and lymphoid organs. In colonic epithelial cells, it mediates the activation of the AKT1 signaling pathway, leading to subsequent production of IL8. CHI3L1 also regulates antibacterial responses in the lung by enhancing macrophage bacterial killing, controlling bacterial dissemination, and promoting host tolerance. Additionally, it plays a role in regulating hyperoxia-induced injury, inflammation, and epithelial apoptosis in the lung. It exists as a monomer.

Caution: Product has not been fully validated for medical applications. For research use only.

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