

LMCD1 Protein, Human (His)

Cat. No.:	HY-P70926
Synonyms:	LIM and cysteine-rich domains protein 1; LMCD1; Dyxin
Species:	Human
Source:	E. coli
Accession:	Q9NZU5 (M1-S365)
Gene ID:	29995
Molecular Weight:	Approximately 45.0 kDa

PROPERTIES

AA Sequence	<p> M A K V A K D L N P G V K K M S L G Q L Q S A R G V A C L G C K G T C S G F E P H S W R K I C K S C K C S Q E D H C L T S D L E D D R K I G R L L M D S K Y S T L T A R V K G G D G I R I Y K R N R M I M T N P I A T G K D P T F D T I T Y E W A P P G V T Q K L G L Q Y M E L I P K E K Q P V T G T E G A F Y R R R Q L M H Q L P I Y D Q D P S R C R G L L E N E L K L M E E F V K Q Y K S E A L G V G E V A L P G Q G G L P K E E G K Q Q E K P E G A E T T A A T T N G S L S D P S K E V E Y V C E L C K G A A P P D S P V V Y S D R A G Y N K Q W H P T C F V C A K C S E P L V D L I Y F W K D G A P W C G R H Y C E S L R P R C S G C D E I I F A E D Y Q R V E D L A W H R K H F V C E G C E Q L L S G R A Y I V T K G Q L L C P T C S K S K R S </p>
Appearance	Solution.
Formulation	Supplied as a 0.2 µm filtered solution of 20 mM Tris-HCl, 150 mM NaCl, 1 mM EDTA, pH 8.0.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	N/A
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	LMCD1, a transcriptional cofactor, serves as a regulatory brake on GATA6 function, exerting control by impeding GATA6's DNA-binding capacity and thereby suppressing its transcriptional activation of downstream target genes. Specifically, LMCD1 intervenes to repress GATA6-mediated transactivation of tissue-specific promoters in lung and cardiac tissues,
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displaying a crucial role in regulating these developmental processes. Additionally, LMCD1 acts as a modulator of DNA-binding by inhibiting GATA4 and GATA1 at the cTNC promoter. The intricate interplay between LMCD1 and GATA transcription factors underscores its significance in finely tuning gene expression, particularly in the context of cardiac hypertrophy, where LMCD1's activation of the calcineurin/nuclear factor of activated T-cells signaling pathway is implicated. LMCD1's molecular interactions extend to GATA1, GATA4, and beta-dystroglycan, highlighting its multifaceted involvement in transcriptional regulation and cellular processes.

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

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