Leukotriene A4 Hydrolase/LTA4H Protein, Human (HEK293, His)

Cat. No.:	HY-P70277
Synonyms:	rHuLeukotriene A-4 hydrolase/LTA4H, His; Leukotriene A-4 hydrolase; LTA-4 hydrolase; Leukotriene A(4) hydrolase; LTA4; LTA4H
Species:	Human
Source:	HEK293
Accession:	P09960 (M1-D611)
Gene ID:	4048
Molecular Weight:	60-70 kDa

PROPERTIES

AA Sequence	MPEIVDTCSL ASPASVCRTK HLHLRCSVDF TRRTLTGTAA LTVQSQEDNL RSLVLDTKDL TIEKVVINGQ EVKYALGERQ SYKGSPMEIS LPIALSKNQE IVIEISFETS PKSSALQWLT PEQTSGKEHP YLFSQCQAIH CRAILPCQDT PSVKLTYTAE VSVPKELVAL MSAIRDGETP DPEDPSRKIY KFIQKVPIPC YLIALVVGAL ESRQIGPRTL VWSEKEQVEK SAYEFSETES MLKIAEDLGG PYVWGQYDLL VLPPSFPYGG MENPCLTFVT PTLLAGDKSL SNVIAHEISH SWTGNLVTNK TWDHFWLNEG HTVYLERHIC GRLFGEKFRH FNALGGWGEL QNSVKTFGET HPFTKLVVDL TDIDPDVAYS SVPYEKGFAL LFYLEQLLGG PEIFLGFLKA YVEKFSYKSI TTDDWKDFLY SYFKDKVDVL NQVDWNAWLY SPGLPPIKPN YDMTLTNACI ALSQRWITAK EDDLNSFNAT DLKDLSSHQL NEFLAQTLQR APLPLGHIKR MQEVYNFNAI NNSEIRFRWL RLCIQSKWED AIPLALKMAT EQGRMKFTRP LFKDLAAFDK SHDQAVRTYQ EHKASMHPVT AMLVGKDLKV D
Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Solution.
Formulation	Supplied as a 0.2 μm filtered solution of 20 mM MES, 2 mM EDTA, 20% Glycerol, pH 5.0.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	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	The jADRB1 protein, a member of the beta-adrenergic receptor family, plays a critical role in mediating the activation of adenylate cyclase by catecholamines through G protein signaling. It exhibits similar affinity for binding to epinephrine and norepinephrine. Moreover, ADRB1 protein facilitates Ras activation via G(s)-alpha- and cAMP-mediated signaling pathways. Interestingly, it is also involved in regulating sleep/wake behaviors. ADRB1 protein directly interacts with RAPGEF2 through its C-terminus PDZ motif and further interacts with GOPC, MAGI3, and DLG4. Moving on to the Leukotriene A4 Hydrolase/LTA4H Protein, it is a bifunctional zinc metalloenzyme that possesses both epoxide hydrolase (EH) and aminopeptidase activities. LTA4H acts as an epoxide hydrolase, catalyzing the conversion of LTA4 to the pro-inflammatory mediator leukotriene B4 (LTB4). Additionally, it demonstrates aminopeptidase activity, specifically targeting N-terminal arginines of various synthetic tripeptides. Apart from its pro-inflammatory EH activity, LTA4H may counteract inflammation through its aminopeptidase activity by inactivating the neutrophil attractant Pro-Gly-Pro (PGP), a bioactive collagen fragment generated by matrix metalloproteinase-9 (MMP9) and prolylendopeptidase (PREPL). Furthermore, LTA4H is involved in the biosynthesis of resolvin E1 and 18S-resolvin E1 from eicosapentaenoic acid, which are lipid mediators with potent anti-inflammatory and pro-resolving actions.

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