Recombinant Human IRAK4/IRAK-4 Protein (His Tag)

Catalog Number: PKSH030387

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

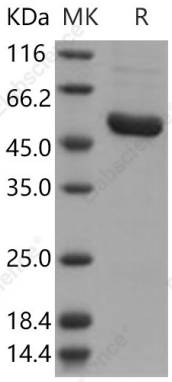
Description

Species	Human
Source	Baculovirus-Insect Cells-derived Human IRAK4/IRAK-4 protein Met 1-Ser 460, with an N-terminal His
Calculated MW	53.8 kDa
Observed MW	48 kDa
Accession	Q9NWZ3-1
Bio-activity	The specific activity was determined to be 169 nmol/min/mg using MBP as substrate.

Properties

Purity	> 92% as determined by reducing SDS-PAGE.
Concentration	Subject to label value.
Endotoxin	< 1.0 EU per μg of the protein as determined by the LAL method.
Storage	Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.
Shipping	This product is provided as liquid. It is shipped at frozen temperature with blue ice/ gel packs. Upon receipt, store it immediately at < - 20°C.
Formulation	Supplied as sterile solution of 20 mM Tris, 500 mM NaCl, 0.5 mM PMSF, pH 7.4

Data



> 92 % as determined by reducing SDS-PAGE.

Background

Interleukin-1 receptor-associated kinase 4, also known as Renal carcinoma antigen NY-REN-64, IRAK-4 and IRAK4, is a member of the protein kinase superfamily, TKL Ser/Thr protein kinase family and Pelle subfamily. IRAK4 contains onedeath domain and oneprotein kinase domain. IRAK4 is required for the efficient recruitment of IRAK1 to the IL-1 receptor complex following IL-1 engagement, triggering intracellular signaling cascades leading to transcriptional up-regulation and mRNA stabilization. It also phosphorylates IRAK1. A member of the IL-1 receptor (IL-1R)-associated kinase (IRAK) family, IRAK4, has been shown to play an essential role in Toll-like receptor (TLR)-mediated signaling. IL-1-mediated IRAK4 kinase activity in T cells is essential for induction of IL-23R expression, Th17 differentiation, and autoimmune disease. Pharmacological blocking of IRAK4 kinase activity will retain some levels of host defence, while reducing the levels and duration of inflammatory responses, which should provide beneficial therapies for sepsis and chronic inflammatory diseases. Defects in IRAK4 are the cause of recurrent isolated invasive pneumococcal disease type 1 (IPD1) which is defined as two episodes of IPD occurring at least 1 month apart, whether caused by the same or different serotypes or strains. Recurrent IPD occurs in at least 2% of patients in most series, making IPD the most important known risk factor for subsequent IPD. Defects in IRAK4 are also the cause of IRAK4 deficiency which causes extracellular pyogenic bacterial and fungal infections in otherwise healthy children.

Toll-free: 1-888-852-8623
Tel: 1-832-243-6086
Fax: 1-832-243-6017
Web: www.elabscience.com
Email: techsupport@elabscience.com