ABL1 Protein, Human (sf9, GST)

Cat. No.:	HY-P77308
Synonyms:	Abelson murine leukemia viral oncogene homolog 1; Abelson tyrosine protein kinase 1; Abl 1; ABL; JTK7; p150; Proto oncogene tyrosine protein kinase ABL1
Species:	Human
Source:	Sf9 insect cells
Accession:	P00519-2 (P137-S554)
Gene ID:	25
Molecular Weight:	Approximately 65 kDa

PROPERTIES

Biological Activity	The specific activity was determined to be >240 nmol/min/mg using synthetic Abl peptide (EAIYAAPFAKKK) as substrate.
Appearance	Solution.
Formulation	Supplied as a 0.2 μm filtered solution of 50 mM Tris, 100 mM NaCl, 0.5 mM PMSF, 0.5 mM EDTA, 0.5 mM Reduced Glutathione, pH 8.0
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	ABL1, a non-receptor tyrosine-protein kinase, orchestrates diverse cellular processes crucial for growth and survival. Its multifaceted roles include coordinating cytoskeleton remodeling in response to extracellular cues, regulating cell motility, and influencing receptor endocytosis. ABL1's impact extends to autophagy, DNA damage response, and apoptosis, where it phosphorylates key substrates involved in these pathways. Notably, it modulates actin dynamics by phosphorylating proteins like WASF3 and ANXA1, influencing processes such as lamellipodia formation and cell migration. A critical player in cell adhesion and motility, ABL1 phosphorylates regulators like BCAR1 and CRK. Furthermore, it engages in the regulation of receptor tyrosine kinases, including the facilitation of EGFR endocytosis. ABL1's reach extends to mitochondrial function during oxidative stress, where it mediates dysfunction and cell death. Additionally, it translocates to the nucleus, contributing to DNA damage response, apoptosis, and the regulation of T-cell differentiation. ABL1's extensive substrate repertoire encompasses proteins involved in DNA repair and apoptosis, showcasing its central role in cellular homeostasis and response to external stimuli.

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

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