

## C-ABL/ABL1 Protein, Human, Recombinant (E255V, His)

### General Information

Protein Construction:	Recombinant human ABL1 (E255V) (27-end) was expressed by baculovirus in Sf9 insect cells using an N-terminal His tag.
Species:	Human
Expression Host:	Baculovirus-Insect Cells
Accession:	P00519
Molecular Weight:	~135 kDa

### QC Testing

Biological Activity:	The specific activity of ABL1 (E255V) was determined to be 1,200 nmol/min/mg by radioactive kinase assay.
Purity:	>70% as determined by SDS-PAGE.
Formulation:	Supplied as sterile 50 mM sodium phosphate, pH 7.0, 300 mM NaCl, 150 mM imidazole, 0.1 mM PMSF, 2 mM DTT, 25% glycerol.

### Preparation and Storage

#### Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

*Actual storage temperature shall be subject to the COA.*

#### Shipping:

Enzymes are highly recommended to be shipped at frozen temperature with dry ice. Shipment made at ambient temperature may seriously affect the activity of the ordered products.

### Protein Background

c-Abl belongs to the class of tyrosine kinases and is the prototype of a subfamily which includes two members, c-Abl and Arg (Abl-related gene). Both proteins are localized at the cell membrane, actin cytoskeleton and cytosol, and c-Abl is present in the nucleus as well. c-Abl is a non-receptor tyrosine kinase that participates in multiple signaling pathways linking the cell surface, cytoskeleton, and the nucleus. Recent in vitro studies have also linked c-Abl to amyloid-beta-induced toxicity and tau phosphorylation. c-Abl has been implicated in many cellular processes including differentiation, division, adhesion, death, and stress response. c-Abl is a latent tyrosine kinase that becomes activated in response to numerous extra- and intra-cellular stimuli. The c-Abl protein is a ubiquitously expressed nonreceptor tyrosine kinase involved in the development and function of many mammalian organ systems, including the immune system and bone. It regulates the cellular response to TAM through functional interaction with the estrogen receptor, which suggests c-Abl as a therapeutic target and a prognostic tumor marker for breast cancer. c-Abl also plays a key role in signaling chemokine-induced T-cell migration. In addition, c-Abl contains NLSs (nuclear localization signals) and DNA-binding sequences important for nuclear functions. c-Abl has become an important therapeutic target in human chronic myeloid leukaemia.

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