Recognition Determinants: The recognition motif for phosphorylation by Abl is I/V/LYXP/F. Abl, like many cytosolic protein tyrosine kinases, preferentially phosphorylates sites recognized by its own SH2 domain, selects substrates with large hydrophobic amino acids at the +3 position and β-branched amino acids at the -1 position (4).

Source: Isolated from a strain of E. coli that carries the truncated Abl Protein Kinase encoded by the Abelson murine leukemia virus under the control of a T7 expression system (kindly provided by Dr. S. Goff).

Supplied in: 100 mM NaCl, 50 mM HEPES (pH 7.5 @ 25°C), 0.1 mM EDTA, 1 mM DTT, 0.01% Brij 35 and 50% glycerol.

Reagents Supplied with Enzyme: 1X NEBuffer for PK (NEB #B6022), supplemented with 200 µM ATP (NEB #P0756) and gamma-labeled ATP to a final specific activity of 100–500 µCi/µmol. Incubate at 30°C.

1X NEBuffer for PK:
50 mM Tris–HCl
10 mM MgCl₂
0.1 mM EDTA
2 mM DTT
0.01% Brij 35
pH 7.5 @ 25°C

Quality Control Assays
Protease Activity: After incubation of 500 units of Abl Protein Tyrosine Kinase (Abl) with a standard mixture of proteins for 2 hours at 30°C, no proteolytic activity could be detected by SDS-PAGE analysis.

Phosphatase Activity: After incubation of 500 units of Abl with 50 mM p-Nitrophenyl-phosphate for 2 hours at 30°C, no phosphatase activity could be detected by spectrophotometric analysis.

Heat Inactivation: 65°C for 20 minutes

Notes On Use: Avoid freeze/thaw cycles. Can be stored for 2 weeks or less at −20°C.

References: