ABL2 (Human), Active

Recombinant protein expressed in Sf9 cells

Cat# CY-SPA04

Lot No. U265-2
5 µg 0.1 µg/µl

Background:

ABL2 (or ARG) is a nonreceptor cytoplasmic tyrosine kinase which is closely related to but distinct from ABL1. The similarity of ABL1 and ABL2 includes the tyrosine kinase domains and extends amino-terminal to include the SH2 and SH3 domains. ABL2 is involved in translocation with the ETV6 gene in human leukemia and has an altered expression in several human carcinomas (1). Two isoforms of ABL2 with different N-termini (1A and 1B) have been identified. The C-terminal domain of ABL2 contains two F-actin-binding sequences that perform a number of actions related to cell morphology and motility by interacting with actin filaments (2).

Product Description:

Recombinant human ABL2 (38-end) was expressed by baculovirus in Sf9 insect cells using an N-terminal His tag. The gene accession number is NM_005158.

Gene Aliases:

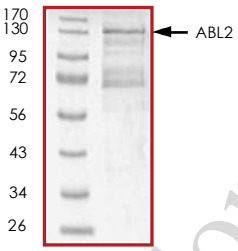
ARG; ABLL

Formulation:

Recombinant protein stored in 50mM Tris-HCl, pH 7.5, 150mM NaCl, 0.25mM DTT, 0.1mM EGTA, 0.1mM EDTA, 0.1mM PMSF, 25% glycerol.

Purity & Molecular Weight:

The purity was determined to be >70% by densitometry. Approx. MW 132kDa.



Storage:

Store product at –70 °C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

Stability:

1 year at –70 °C from date of shipment.

Specific Activity:

The specific activity was determined to be 1218 nmol /min/mg as per Activity Assay Protocol.

Activity Assay Protocol:

Assay activity of the kinase in a 25 µL reaction consisting of 5 µL of 5 X Kinase Assay Buffer, 5 µL of 1 mg/ml the Substrate Solution, 10 µL of diluted kinase and 5 µL of 250 µM ATP solution containing [gamma ^{32}P] ATP (0.167 µCi/µL). Start the reaction by adding the ATP solution. Incubate for 15 minutes at 30°C. Terminate the reaction by spotting 20 µL of the reaction mixture onto phosphocellulose P81 paper. Air-dry the P81 paper and sequentially wash 4 times for approximately 10 minutes each in 1% phosphoric acid with constant gentle stirring. Count the P81 paper in a liquid scintillation counter.

Substrate Solution:

Abltide synthetic peptide substrate (EAIYAAPFAKKK) diluted in distilled H_2O to a final concentration of 1mg/ml.

5 X Kinase Assay Buffer:

25mM MOPS, pH 7. 2, 12.5mM β-glycerol-phosphate, 25mM MgC12, 5mM EGTA, 2mM EDTA. Add 0.25mM DTT to Kinase Assay Buffer prior to use.

References:

1.Barila, D. et al : An intramolecular SH3-domain interaction regulates c-Abl activity. Nature Genet. 18: 280-282, 1998.

2.Griesinger, F. et al: Identification of an ETV6-ABL2 fusion transcript in combination with an ETV6 point mutation in a T-cell acute lymphoblastic leukaemia cell line. Br J Haematol. 2002 Nov;119(2):454-8.

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