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Produktinformation

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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ALK (G1202R), GST-Tag Recombinant

Catalog: 101920
Lot: 230711

Product Information

Description: Recombinant human ALK (G1202R) (anaplastic lymphoma kinase), encompassing amino acids 1060-end with a G1202R mutation. This construct contains an N-terminal GST-tag. The recombinant protein was affinity purified and is active.

Background: ALK (anasplatic lymphoma kinase), also known as ALK tyrosine kinase receptor or CD246 (cluster of differentiation 246), is a receptor tyrosine kinase involved in signal transduction. In the presence of a ligand ALK dimerizes and a conformational change result in autoactivation of the kinase domain. Activated AKL will phosphorylate other AKL receptors and activate downstream signaling pathways. ALK is present in the nervous system during development, where it participates in retinal axon growth and targeting, synapse development, sleep, learning and long-term memory. Interestingly, dysfunction of ALK in one of three possible ways can lead to cancer: fusion with another gene, gene duplication or gene mutations. ALK, as its name indicates, has been linked to anaplastic large-cell lymphoma, but also non-small-cell lung cancer (NSCLC), neuroblastoma, breast cancer, renal carcinoma and others. Inhibitors of ALK show great therapeutical potential, two of them being already commercially available for the treatment of late-stage lung cancer and NSCLC. Further studies into ALK will deepen our understanding of its functions, find new inhibitors and new therapeutic avenues for patients with AKL-linked cancer.

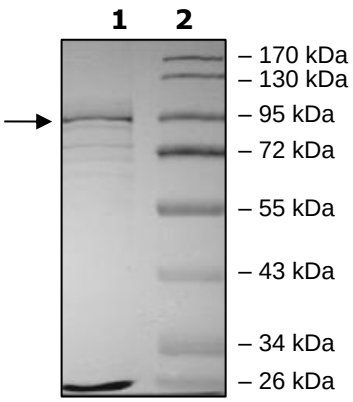
Species: Human
Construct: ALK (G1202R) (GST-1060-end)
Mutation: G1202R
Concentration: 0.10 mg/ml
Expression System: Sf9
Purity: 70% (Purity calculation does not include co-purifying Glutathione-binding proteins.)
Format: Aqueous buffer solution.
Formulated In: 50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 10 mM Glutathione, 0.1 mM EDTA, 0.25 mM DTT, 0.1 mM PMSF, 25% glycerol
MW: 90 kDa
Genbank Accession: NM_004304
Stability: At least 6 months at -80°C.
Storage: -80°C
Instructions for Use: Thaw on ice and gently mix prior to use. DO NOT VORTEX. Perform a quick spin before opening. Aliquot into small volumes and flash freeze for long term storage. Avoid multiple freeze/thaw cycles.
Specific Activity: 5.8 pmol/min/µg
Assay Conditions: ALK (G1202R) activity was measured by using the IGF1Rtide synthetic peptide (KKKSPGEYVNIEFG) diluted in distilled water to a working concentration of 1 mg/ml, in the ADP Glo™ Kinase Assay kit (Promega #V9101). Reaction was initiated by mixing increasing amounts of ALK (G1202R) with 25 µM ATP in 40 mM Tris-HCl, pH 7.4, 20 mM $MgCl_2$, 2.5 mM $MnCl_2$, 0.1 mg/ml BSA prepared with 50 µM DTT and substrate at a final concentration of 200 µg/ml.
After a 40-minute incubation at room temperature, the reaction was terminated by addition of ADP-Glo™ Reagent, followed by a subsequent 40-minute incubation at room temperature. Kinase Detection Reagent was added, and the reaction was incubated for another 30 minutes at ambient temperature. Detection of luminescence was measured using the Luminescence Module Protocol on GloMax®-Multi Microplate Multimode Reader. The Specific Activity was calculated as follows: (Corrected activity, RLU) / [(Specific activity from ADP in RLU/pmol) * (Reaction time in min) *(Enzyme amount in µg or mg)]. Corrected RLU was calculated by subtracting the blank value from all the

values. The blank was determined from a “no enzyme” sample by replacing the enzyme solution with an equal volume of Dilution Buffer X (1x).

Applications: Useful for the study of enzyme kinetics, screening inhibitors, and selectivity profiling.

Quality Control Data

4-20% SDS-PAGE Coomassie Staining



Specific Activity