CAMK2β, His-tag Recombinant

Catalog: 40041

Lot: 230419

Product Information

Description:	Recombinant human CAMK2β (Calcium/calmodulin Dependent Protein Kinase II Beta), encompassing amino acids 1-503. This construct contains an N-terminal His-tag. The recombinant protein was affinity purified and is active.
Construct:	CAMK2β (His-Full Length)
Concentration:	0.10 mg/ml
Species:	Human
Formulated In:	50 mM Sodium Phosphate, pH 7.0, 300 mM NaCl, 150 mM Imidazole, 0.1 mM PMSF, 0.2 mM DTT, 25% glycerol
Expression System:	Sf9
Format:	Aqueous buffer solution
Stability:	At least 6 months at -80°C. Avoid freeze/thaw cycles.
Storage:	-80°C
Genbank Accession:	NM_172081
MW:	58 kDa
Purity:	70%
Specific Activity:	2,109 pmol/min/µg
Assay Conditions:	CAMK2β activity was measured by using the autocamtide 2 synthetic peptide substrate (KKALRRQETVDAL-amide), diluted in distilled water to a final concentration of 1 mg/ml, in the ADP Glo™ assay (Promega #V9101). Reaction was initiated by mixing increasing amounts of the CAMK2β with 25 µM ATP in 40 mM Tris-HCl, pH 7.4, 20 mM $MgCl_2$, 0.1 mg/ml BSA prepared with 250 µM DTT, co-factor calcium/calmodulin and substrate at a final concentration of 200 µg/ml final concentration. 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 corrected activity (RLU) was calculated by removing the blank value for each sample. The Kinase Specific Activity was calculated as follows: RLU / (specific activity of ADP in RLU/pmol)*(Reaction time in min)*(Enzyme amount in µg or mg). The blank was determined from a “no kinase” sample by replacing the enzyme solution with an equal volume of Kinase Dilution Buffer IX (1X).
Applications:	Useful for the study of enzyme kinetics, screening inhibitors, and selectivity profiling.

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Quality Control Data

4-20% SDS-Page Coomassie Staining	Specific Activity