



MARK1 Protein Crystal

Catalog: CBCRY40

PRODUCT INFORMATION

Name MARK1 Protein Crystal

Cat No. CBCRY40

Fragment Residues 38-364

Protein Description MAP/microtubule Affinity-regulating Kinase 1

Background

The microtubule-associated protein (MAP)/microtubule affinity regulating kinase (MARK)/Par-1 phosphorylates microtubule-associated proteins tau, MAP2, and MAP4 and is involved in the regulation of microtubule-based transport. There are four isoforms of MARK in the human kinome that form a subfamily of the Snf1/AMP-activated protein kinase family of kinases within the calcium/calmodulin-dependent protein kinase group. MARK kinases are relatively large; the longest isoform, MARK1, comprises 795 amino acids. It is involved in the regulation of neuronal migration through its dual activities in regulating cellular polarity and microtubule dynamics, possibly by phosphorylating and regulating DCX. MARK1 also acts as a positive regulator of the Wnt signaling pathway, probably by mediating phosphorylation of dishevelled proteins (DVL1, DVL2 and/or DVL3).

Protein Classification Signaling Protein, Transferase

Structure Weight 301702.41 Da

Method X-Ray Diffraction

Resolution 2.60 Å

Reference

Marx A, Nugoor C, Mueller J, Panneerselvam S, Timm T, Bilanz M, Mylonas E, Svergun DI, Mandelkow E-, Mandelkow EJ. *Biol.Chem.* Structural variations in the catalytic and ubiquitin-associated domains of microtubule-associated protein/microtubule affinity regulating kinase (Mark) 1 and mark2. (2006) 281 p.27586