

Product datasheet

Recombinant human CDK7 + Cyclin H + MNAT1 protein ab64303

[2 References](#) [5 Images](#)

Description

Product name	Recombinant human CDK7 + Cyclin H + MNAT1 protein
Biological activity	Specific activity: 19 nmol/min/mg.
Purity	> 90 % SDS-PAGE.
Expression system	Baculovirus infected Sf9 cells
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human

Specifications

Our [Abpromise guarantee](#) covers the use of **ab64303** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	SDS-PAGE Functional Studies
Form	Liquid
Additional notes	ab64311 (Myelin Basic Protein protein) can be utilized as a substrate for assessing kinase activity

Preparation and Storage

Stability and Storage	Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles. pH: 7.00 Preservative: 1.02% Imidazole Constituents: 0.00174% PMSF, 0.82% Sodium phosphate, 0.00308% DTT, 25% Glycerol (glycerin, glycerine), 1.74% Sodium chloride This product is an active protein and may elicit a biological response in vivo, handle with caution.
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General Info

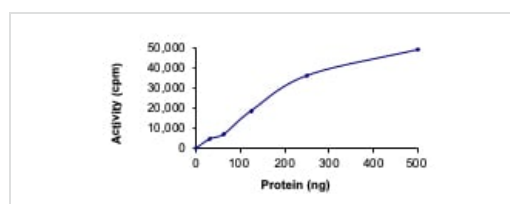
Relevance

CDK7: Cyclin-dependent kinases (CDKs) are activated by the binding to a cyclin and mediate the progression through the cell cycle. Each different complex controls a specific transition between two subsequent phases in the cell cycle. CDK7 is the catalytic subunit of the CDK-activating kinase (CAK) complex, a serine-threonine kinase. CAK activates the cyclin-associated kinases CDC2/CDK1, CDK2, CDK4 and CDK6 by threonine phosphorylation. CAK complexed to the core-TFIH basal transcription factor activates RNA polymerase II by serine phosphorylation of the repetitive C-terminus domain (CTD) of its large subunit (POLR2A), allowing its escape from the promoter and elongation of the transcripts. Involved in cell cycle control and in RNA transcription by RNA polymerase II. Its expression and activity are constant throughout the cell cycle. Cyclin H: Regulates CDK7, the catalytic subunit of the CDK-activating kinase (CAK) enzymatic complex. CAK activates the cyclin-associated kinases CDC2/CDK1, CDK2, CDK4 and CDK6 by threonine phosphorylation. CAK complexed to the core-TFIH basal transcription factor activates RNA polymerase II by serine phosphorylation of the repetitive C-terminus domain (CTD) of its large subunit (POLR2A), allowing its escape from the promoter and elongation of the transcripts. Involved in cell cycle control and in RNA transcription by RNA polymerase II. Its expression and activity are constant throughout the cell cycle. MNAT1: Stabilizes the cyclin H-CDK7 complex to form a functional CDK-activating kinase (CAK) enzymatic complex. CAK activates the cyclin-associated kinases CDC2/CDK1, CDK2, CDK4 and CDK6 by threonine phosphorylation. CAK complexed to the core-TFIH basal transcription factor activates RNA polymerase II by serine phosphorylation of the repetitive C-terminus domain (CTD) of its large subunit (POLR2A), allowing its escape from the promoter and elongation of the transcripts. Involved in cell cycle control and in RNA transcription by RNA polymerase II.

Cellular localization

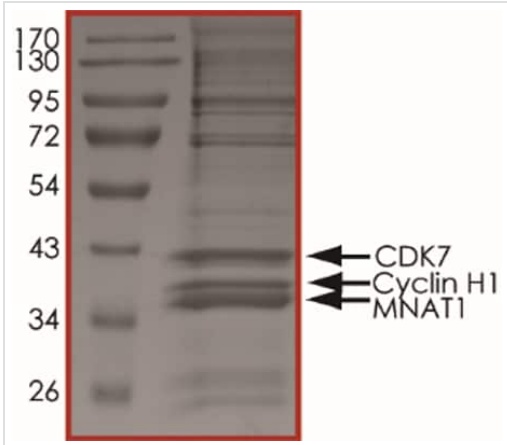
Nuclear

Images



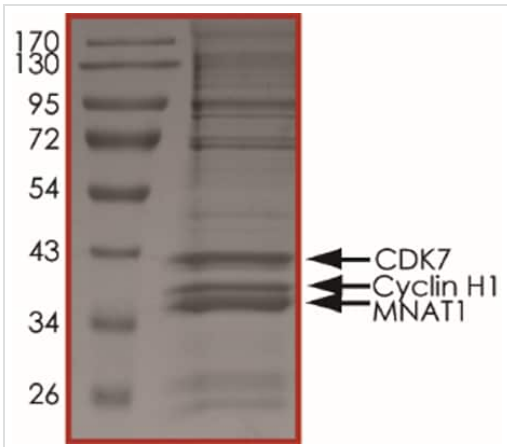
The specific activity of CDK7 + Cyclin H + MNAT1 (ab64303) was determined to be 20 nmol/min/mg as per activity assay protocol

Functional Studies - Recombinant human CDK7 +
Cyclin H + MNAT1 protein (ab64303)



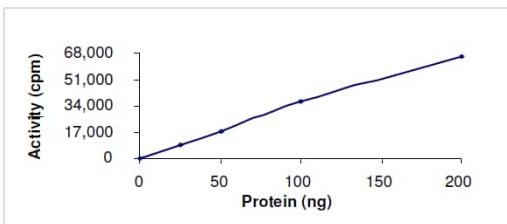
SDS PAGE analysis of ab64303

SDS-PAGE - Recombinant human CDK7 + Cyclin H + MNAT1 protein (ab64303)



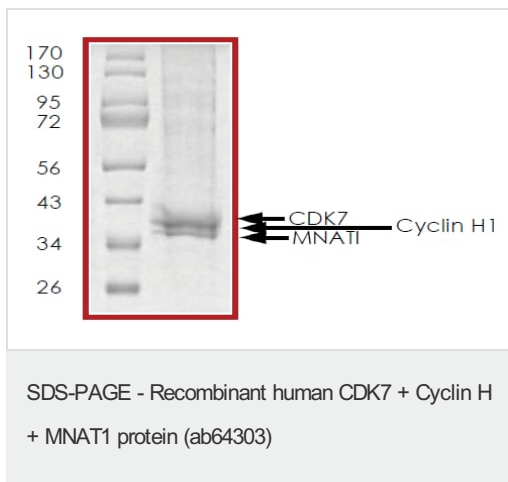
SDS PAGE analysis of ab64303

SDS-PAGE - Recombinant human CDK7 + Cyclin H + MNAT1 protein (ab64303)



The specific activity of CDK7 + Cyclin H + MNAT1 (ab64303) was determined to be 19nmol/min/mg as per activity assay protocol.

Functional Studies - Recombinant human CDK7 + Cyclin H + MNAT1 protein (ab64303)



SDS-PAGE analysis of ab64303. The purity of CDK7 + Cyclin H + MNAT1 (ab64303) was determined to be >90% by densitometry, CDK7 approx. MW 40kDa, CyclinH1 approx. MW 39kDa and MNAT1 approx. MW 37kDa

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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