SANTA CRUZ BIOTECHNOLOGY, INC.

Cdk4 (1-303): sc-4070 WB

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The Power to Question

BACKGROUND

Cell cycle progression is controlled in part by a family of cyclin proteins and cyclin dependent kinases (Cdks). Cdk proteins work in concert with the cyclins to phosphorylate key substrates involved in each phase of cell cycle progression. Another family of proteins, Cdk inhibitors, also plays a role in regulating the cell cycle by binding to cyclin-Cdk complexes and modulating their activity. Several Cdk proteins have been identified, including Cdk2-Cdk8, PCTAIRE-1-PCTAIRE-3, PITALRE and PITSLRE. Cdk4, in complex with D-type cyclins, is thought to regulate cell growth during the G1 phase of the cell cycle. This association with a D-type cyclin upregulates Cdk4 activity, whereas binding to the Cdk inhibitor p16 downregulates Cdk4 activity. Activation of the Cdk4-cyclin complexes requires phosphorylation on a single threonyl residue of Cdk4, catalyzed by a Cdk-activating protein (CAK).

REFERENCES

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SOURCE

Cdk4 (1-303) is expressed in *E. coli* as a 58 kDa tagged fusion protein corresponding to amino acids 1-303 representing full length Cdk4 of human origin.

STORAGE

Store at -20° C; stable for one year from the date of shipment.

PRODUCT

Cdk4 (1-303) is purified from bacterial lysates (>98%) by glutathione agarose affinity chromatography; supplied as 10 µg in 0.1 ml SDS-PAGE loading buffer.

APPLICATIONS

Cdk4 (1-303) is suitable as a Western blotting control for sc-601 and sc-749.

RESEARCH USE

For research use only, not for use in diagnostic procedures.