

## Anti-Cyclin-dependent kinase 9 Cdk9 Antibody

Catalog Number: A00794

### About CDK9

CDK9 (PITALRE) (also known as cyclin-dependent kinase 9, Serine/threonine-protein kinase PITALRE, C-2K and Cell division cycle 2-like protein kinase 4) is a member of the cyclin-dependent protein kinase (CDK) family. CDK family members are highly similar to the gene products of *S. cerevisiae* cdc28, and *S. pombe* cdc2, and known as important cell cycle regulators. CDK9 (PITALRE) interacts with a conserved domain in the TRAF-C region of the tumor necrosis factor signal transducer TRAF2. This kinase also was found to be a component of the multiprotein complex TAK/P-TEFb, which is an elongation factor for RNA polymerase II-directed transcription and functions by phosphorylating the C-terminal domain of the largest subunit of RNA polymerase II. This protein forms a complex with and is regulated by its regulatory subunit cyclin T or cyclin K. HIV-1 Tat protein was found to interact with this protein and cyclin T, which suggested a possible involvement of this protein in AIDS. Tat stimulates human HIV-1 viral transcription elongation. This suggests that cyclin T1/cdk9(PITALRE) is one of the HIV-1 required host cellular cofactors generated during T cell activation. Cyclin T1/cdk9(PITALRE) is shown to interact with Tat to restore Tat activation in HeLa nuclear extracts depleted of P-TEFb. The cdk9(PITALRE) activity and cyclin T1 are essential for activation of transcription when tethered to the heterologous Rev response element RNA via the regulator of expression of virion Rev. CDK9 (PITALRE) is a ubiquitously expressed nuclear protein.

### Overview

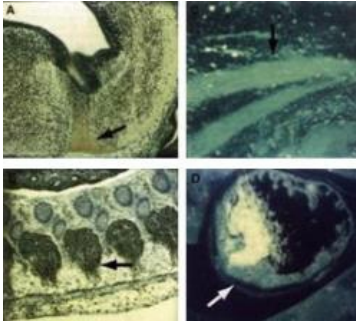
Product Name	Anti-Cyclin-dependent kinase 9 Cdk9 Antibody
Reactive Species	Human, Mouse
Description	Boster Bio Anti-Cyclin-dependent kinase 9 Cdk9 Antibody (Catalog # A00794). Tested in ELISA, IHC, IP, WB applications. This antibody reacts with Human, Mouse.
Application	ELISA, IP, IHC, WB
Clonality	Polyclonal
Formulation	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2, 0.01% (w/v) Sodium Azide
Storage Instructions	Store vial at -20°C prior to opening. Aliquot contents and freeze at -20°C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4°C as an undiluted liquid. Dilute only prior to immediate use. Expiration date is one (1) year from date of opening. (Ship on dry ice.)
Host	Rabbit
Uniprot ID	P50750

### Technical Details

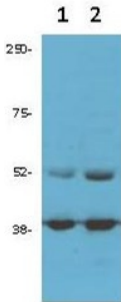
Immunogen	Multiple synthetic peptides corresponding to C-terminal and N-terminal domains of the protein coded by the human gene cdk9 (PITALRE).
Predicted Reactive Species	Bovine, Mammalian

Cross Reactivity	No cross reactivity with other proteins.
Isotype	Antiserum
Form	Liquid (sterile filtered)
Concentration	75 mg/mL by Refractometry
Purification	This product was prepared from monospecific antiserum by delipidation and defibrination. Antiserum will specifically react with a 43 kDa cdk9 (PITALRE) protein from human, rat and mouse tissue. No reaction was observed against other related cyclin dependent kinases. Cross-reactivity with cdk9 (PITALRE) from other species may also occur. The murine cDNA is shown to be 98% identical with human. For immunohistochemistry use paraffin embedded tissue.
Suggested Dilutions	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>ELISA: 1:10,000 - 1:50,000</p> <p>IHC: 1:200 - 1:1,000</p> <p>IP: 1:100</p> <p>WB: 1:500 - 1:3,000</p>

## Anti-Cyclin-dependent kinase 9 Cdk9 Antibody (A00794) Images



Cdk9 was detected in paraffin-embedded sections of mouse tissue using rabbit anti-Cdk9 antiserum polyclonal antibody (Catalog # A00794) at 1:500. Panel A: Peroxidase-DAB immunostaining of mcdk9/PITALRE protein in the developing mouse brain in the differentiated region of the medulla oblongata just below the fourth ventricle. Similar staining is shown in Panel B in the dorsal root ganglia. Panel C: Fluorescein immunofluorescence of mcdk9/PITALRE in skeletal muscle. Similar staining is shown in Panel D in cardiac muscle. The immunohistochemical section was developed using SABC method (Catalog # SA1022).



Western blot analysis of Cdk9 expression in PC3 whole cell lysates (lane 1) and DU145 prostate cancer cell lysates (lane 2). Cdk9 at 55 and 42KD was detected using rabbit anti-Cdk9 antiserum polyclonal antibody (Catalog # A00794) at 1:1500. Personal communication Flavio Rizzolio, Temple University

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