

## Anti-Cyclin D3 Ccnd3 Antibody

Catalog Number: A01744

### About CCND3

Anti-Cyclin D3 antibody was designed, produced, and validated as part of the Joy Cappel Young Investigator Award (JCYIA). Cyclin D3 belongs to a highly conserved cyclin family, whose members are the ultimate recipients of oncogenic signals. Cyclin D3 is a key component of the cell cycle progression machinery and induces progression through the G1 phase of the cell cycle. Cyclin D3 is expressed in nearly all proliferating cells, and shows the most broad expression pattern of all three D-type (D1-D3) cyclins. Cyclin D3 is encoded from the 6p21 chromosome region and the protein is predominantly localized in the nucleus. Once induced, cyclin D3 binds and activates its associated cyclin-dependent kinases CDK4 and CDK6. Amplification of the cyclin D3 gene and overexpression of cyclin D3 protein is seen in several human cancers. A large number of human malignancies contain lesions in pathways impacting on cyclin D3. Abnormal expression of Cyclin D3 is believed to be a driving force in several human cancers. A possible role for cyclin D3 in the malignancies of the lymphoid system is suggested by the observations that cyclin D3 gene is rearranged in several neoplastic diseases such as diffuse large B cell lymphomas or multiple myelomas. Anti-Cyclin D3 is ideal for researchers interested in Cancer Research and Immunology research.

### Overview

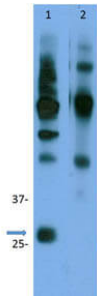
Product Name	Anti-Cyclin D3 Ccnd3 Antibody
Reactive Species	Human, Mouse
Description	Boster Bio Anti-Cyclin D3 Ccnd3 Antibody (Catalog # A01744). Tested in ELISA, Flow Cytometry, IHC, IP applications. This antibody reacts with Human, Mouse.
Conjugate	HRP
Application	ELISA, Flow Cytometry, IP, IHC, WB
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	P30282

### Technical Details

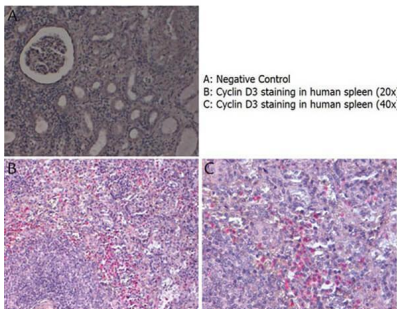
Immunogen	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to the C-terminal domain of mouse Cyclin D3 protein.
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Predicted Reactive Species	Bovine, Mammalian
Isotype	IgG
Form	Liquid (sterile filtered)
Concentration	1.0 mg/ml by UV absorbance at 280 nm
Purification	Cyclin D3 affinity-purified antibody is directed against Cyclin D3 protein. The product was affinity purified from monospecific antiserum by immunoaffinity purification. A BLAST analysis was used to suggest reactivity with this protein from mouse, human, and bovine sources based on 100% homology for the immunogen sequence. Cross-reactivity with other sources has not been determined. No reactivity was observed against Cyclin D2.
Suggested Dilutions	ELISA: 1:1000 - 1:5000 Flow Cytometry: 4µg/mL IHC: 4µg/mL IP: 5µg/mL WB: 1.0 ug/ml This affinity purified antibody has been tested for use in ELISA, immunohistochemistry, flow cytometry, and by immunoprecipitation. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 32.4 kDa in size corresponding to Cyclin D3 protein by western blotting in the appropriate stimulated tissue or cell lysate or extract. ELISA and western blot show equivalent reactivity against phosphorylated and non-phosphorylated Cyclin D3.

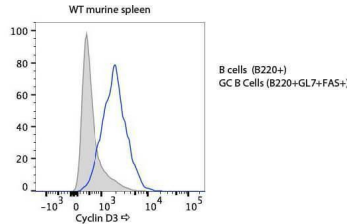
## Anti-Cyclin D3 Ccnd3 Antibody (A01744) Images



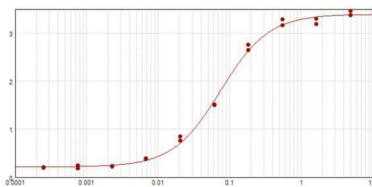
Immunoprecipitation of Rabbit Anti-Cyclin D3. Lane 1: 5 $\mu$ g anti-cyclin D3 antibody/IP. Primary Antibody: Cyclin D3 Mouse mAb. Lane 2: 5 $\mu$ g anti-cyclin D3 antibody/IP. Primary Antibody: Cyclin D2 rabbit pAB. Secondary Antibody: TrueBlot IgG IP beads. Expect: ~32kDa to D3 in lane 1. No reactivity to D2 in lane 2.



Immunohistochemistry with anti-Cyclin D3 antibody showing Cyclin D3 staining in nucleus of lymphocytes in human spleen at 20x and 40x (B & C). Formalin fixed/paraffin embedded sections were subjected to heat induced epitope retrieval (HIER) at pH 6.2 and then incubated with rabbit anti-mouse Cyclin D3 antibody at 4.0  $\mu$ g/ml for 60 minutes. The reaction was developed using MACH 4 universal AP polymer detection system and visualized with WARP RED.



Flow Cytometry of Rabbit anti-Cyclin D3 antibody. Cells: mouse B cells+, 14 days post immunization (NP-CGG). Anti-Cyclin D3-RPE antibody at 1:500 for 20 min at 4 $^{\circ}$ C.



ELISA results of purified Rabbit Anti-Cyclin D3 Antibody tested against BSA-conjugated peptide of cyclin D3 peptide. Each well was coated in duplicate with 0.1 $\mu$ g of conjugate (red line). The starting dilution of antibody was 5 $\mu$ g/ml and the X-axis represents the Log10 of a 3-fold dilution. This titration is a 4-parameter curve fit where the IC50 is defined as the titer of the antibody. Assay performed using Blocking buffer, Goat Anti-Rabbit IgG HRP conjugated and TMB substrate.

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