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# Cyclin B1 (G2- & M-phase Cyclin) Antibody - With BSA and Azide

Mouse Monoclonal Antibody [Clone CCNB1/1098 ]
Catalog # AH12574

## Product Information

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|---|---|
| **Application** | IHC, IF, FC |
| **Primary Accession** | P14635 |
| **Other Accession** | 891, 23960 |
| **Reactivity** | Human, Mouse |
| **Host** | Mouse |
| **Clonality** | Monoclonal |
| **Isotype** | Mouse / IgG1, kappa |
| **Clone Names** | CCNB1/1098 |
| **Calculated MW** | 48337 |

## Additional Information

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|---|---|
| **Gene ID** | 891 |
| **Other Names** | G2/mitotic-specific cyclin-B1, CCNB1, CCNB |
| **Application Note** | IHC~~1:100~500 IF~~1:50~200 FC~~1:10~50 |
| **Storage** | Store at 2 to 8°C.Antibody is stable for 24 months. |
| **Precautions** | Cyclin B1 (G2- & M-phase Cyclin) Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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|---|---|
| **Name** | CCNB1 |
| **Synonyms** | CCNB |
| **Function** | Essential for the control of the cell cycle at the G2/M (mitosis) transition. |
| **Cellular Location** | Cytoplasm. Nucleus. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome |

## Background

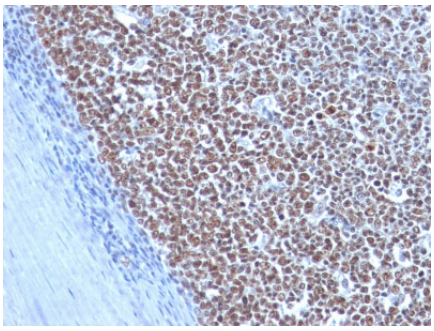
It recognizes a protein of 55-62kDa, identified as cyclin B1. In mammals, cyclin B associates with inactive p34cdc2, which facilitates phosphorylation of p34cdc2 at aa 14Thr and 15Tyr. This maintains the inactive

state until the end of G2-phase. The inactive cyclin B-p34cdc2 complex continues to accumulate in the cytoplasm until the completion of DNA synthesis, when Cdc25, a specific protein phosphatase, dephosphorylates aa 14Thr and 15Tyr of p34cdc2 rendering the complex active at the G2/M boundary. This mitotic kinase complex remains active until the metaphase/anaphase transition when cyclin B is degraded. This degradation process is ubiquitin-dependent and is necessary for the cell to exit mitosis. So, cyclin B-p34cdc2 plays a critical role in G2 to M transition.

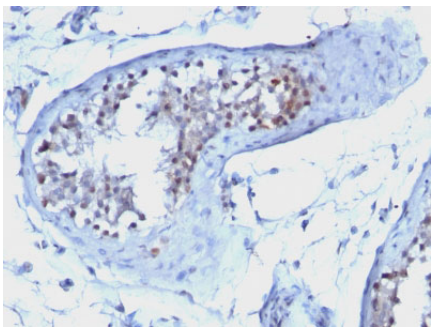
## References

Galaktionov, K. and Beach D. 1991. Specific activation of Cdc25 tyrosine phosphatases by B type cyclins: Evidence for multiple roles of mitotic cyclins. Cell 67: 1181-1194

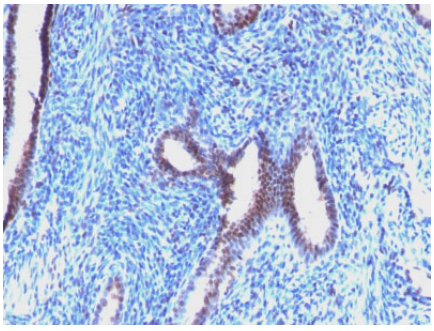
## Images



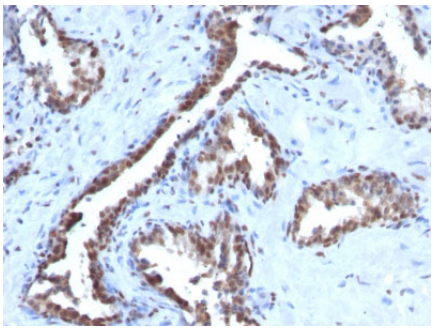
Formalin-fixed, paraffin-embedded human Tonsil stained with Cyclin B1 Monoclonal Antibody (CCNB1/1098)



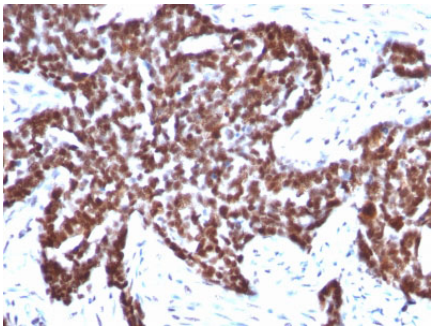
Formalin-fixed, paraffin-embedded human Testicular Carcinoma stained with Cyclin B1 Monoclonal Antibody (CCNB1/1098)



Formalin-fixed, paraffin-embedded human Endometrial Carcinoma stained with Cyclin B1 Monoclonal Antibody (CCNB1/1098)



Formalin-fixed, paraffin-embedded human Prostate Carcinoma stained with Cyclin B1 Monoclonal Antibody (CCNB1/1098)



Formalin-fixed, paraffin-embedded human Ovarian Carcinoma stained with Cyclin B1 Monoclonal Antibody (CCNB1/1098)