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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

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

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

Name	CCNB1
Synonyms	CCNB
Function	Essential for the control of the cell cycle at the G2/M (mitosis) transition (PubMed:27030811, PubMed:17495531, PubMed:17495533). Binds and activates cyclin-dependent protein kinase CDK1/CDC2 (PubMed:41100585).
Cellular Location	Cytoplasm. Nucleus. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome

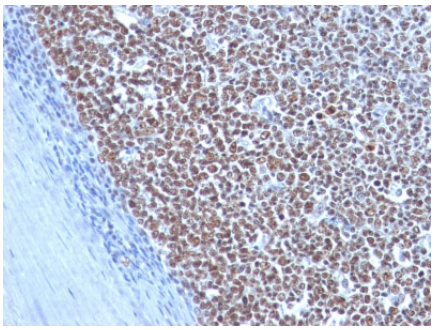
Background

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.

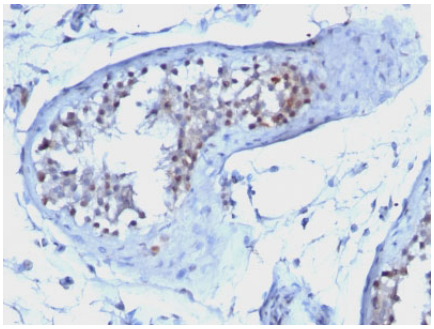
References

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

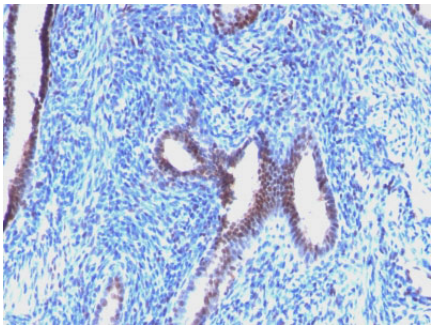
Images



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

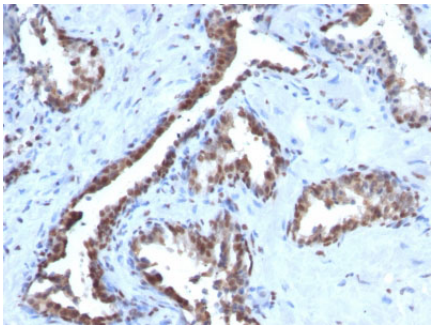


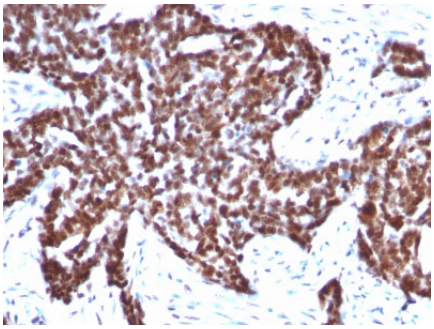
Formalin-fixed, paraffin-embedded human Testicular Carcinoma stained with Cyclin B1 Monoclonal Antibody (CCNB1/1098)



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)

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.