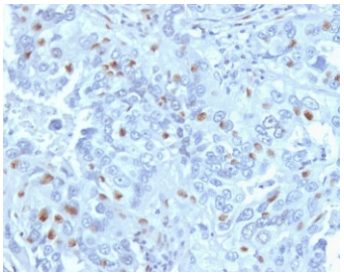
CCNA2 Antibody / Cyclin A2 [clone CNA2-1] (V3783)

Catalog No.	Formulation	Size
V3783-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3783-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3783SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2a, kappa
Clone Name	CNA2-1
Purity	Protein G affinity chromatography
UniProt	P20248
Gene ID	890
Localization	Nuclear, cytoplasmic
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This CCNA2 antibody is available for research use only.



Immunohistochemistry analysis of CCNA2 / Cyclin A2 antibody (clone CNA2-1) in human endometrial carcinoma tissue. Formalin-fixed, paraffin-embedded human endometrial carcinoma tissue was stained using CCNA2 antibody (clone CNA2-1). Heat-induced epitope retrieval was performed by steaming tissue sections in citrate buffer, pH 6.0, for 20 minutes, followed by cooling prior to antibody incubation. Brown chromogenic signal is observed predominantly in the nuclei of scattered tumor epithelial cells, consistent with proliferative cell populations, while surrounding stromal cells show minimal staining. This nuclear staining pattern reflects cell cycle-associated expression of Cyclin A2 in endometrial carcinoma.

Description

CCNA2 Antibody recognizes Cyclin A2, also known as CCNA2 and Cyclin A, a core cell cycle regulatory protein that controls progression through S phase and G2 phase. Cyclin A2 is a member of the cyclin family of cell cycle proteins and functions as a regulatory subunit for cyclin-dependent kinases, most notably CDK2 and CDK1. CCNA2 Antibody is frequently described as Cyclin A2 antibody or Cyclin A antibody and is widely used in studies of cellular proliferation, mitotic regulation, and tumor biology.

Cyclin A2 expression is tightly regulated and cell cycle dependent. CCNA2 levels rise during S phase, where Cyclin A2-CDK2 complexes promote DNA replication, and remain elevated through G2 phase as Cyclin A2-CDK1 activity contributes to preparation for mitosis. Because of this defined temporal expression pattern, Cyclin A2 serves as a marker of actively cycling cells and is often evaluated alongside other proliferation markers in research studies. In tissue sections, CCNA2 staining is typically localized to the nuclei of proliferating epithelial or tumor cells, while quiescent or terminally differentiated cells exhibit minimal expression.

Altered Cyclin A2 expression has been documented in a broad range of malignancies. Increased CCNA2 levels are frequently associated with enhanced proliferative activity and aggressive tumor phenotypes in various carcinomas and other neoplasms. Consequently, CCNA2 antibody staining patterns are commonly examined in investigations of cell cycle dysregulation, oncogenic signaling pathways, and tumor growth dynamics. Cyclin A2 is also studied in developmental and regenerative contexts where active cell division is prominent.

At the molecular level, Cyclin A2 functions as a checkpoint regulator that coordinates DNA synthesis and mitotic entry through precise control of cyclin-dependent kinase activity. Its essential role in S phase progression and G2-M transition makes CCNA2 Antibody a valuable tool for assessing proliferative status, studying cell cycle dynamics, and investigating mechanisms of uncontrolled cell division.

Application Notes

Optimal dilution of the recombinant CCNA2 antibody should be determined by the researcher.

Immunogen

Full length protein was used as the immunogen for this CCNA2 antibody.

Storage

Store the CCNA2 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

References (1)