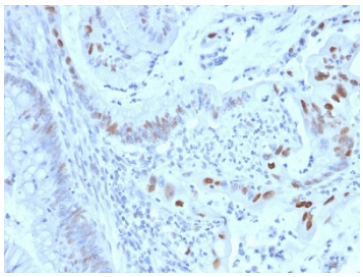
Cyclin E1 Antibody / G1-S Cell Cycle Regulator Antibody [clone CCNE1/2460] (V3685)

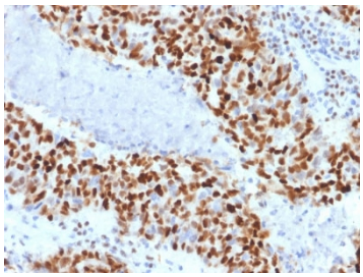
Catalog No.	Formulation	Size
V3685-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3685-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3685SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

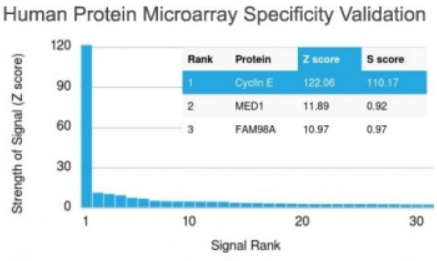
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	CCNE1/2460
Purity	Protein G affinity chromatography
UniProt	P24864
RRID	AB_3754321
Localization	Nuclear
Applications	Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This Cyclin E1 Antibody / G1-S Cell Cycle Regulator Antibody is available for research use only.



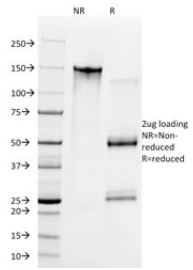
Cyclin E1 Antibody Human Colon Carcinoma IHC. Immunohistochemistry staining of FFPE human colon carcinoma tissue using Cyclin E1 Antibody / G1-S Cell Cycle Regulator Antibody (clone CCNE1/2460) demonstrates distinct nuclear HRP-DAB brown staining within scattered malignant epithelial cell populations. The predominantly nuclear staining pattern is consistent with expression of Cyclin E1 (CCNE1), a key regulator of the G1-S transition that promotes DNA replication through activation of CDK2-dependent cell cycle pathways. Detection of Cyclin E1 within proliferating tumor cells aligns with its established role in cellular proliferation, cell cycle progression, and regulation of growth-associated transcriptional programs. HIER: boil tissue sections in pH 6, 10 mM citrate buffer for 10-20 minutes followed by cooling at room temperature for 20 minutes before testing.



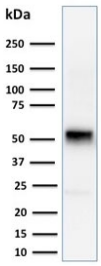
Cyclin E1 Antibody Human Colon Carcinoma Nuclear IHC. Immunohistochemistry staining of FFPE human colon carcinoma tissue using Cyclin E1 Antibody / G1-S Cell Cycle Regulator Antibody (clone CCNE1/2460) demonstrates strong nuclear HRP-DAB brown staining throughout a large proportion of malignant epithelial cells. The intense nuclear localization is consistent with expression of Cyclin E1 (CCNE1), a key regulator of the G1-S transition that controls entry into DNA replication through activation of CDK2-dependent cell cycle pathways. The high frequency of Cyclin E1-positive nuclei observed within tumor cell populations is consistent with active cellular proliferation and the established role of Cyclin E1 in cell cycle progression, growth regulation, and oncogenic signaling. HIER: boil tissue sections in pH 6, 10 mM citrate buffer for 10-20 minutes followed by cooling at room temperature for 20 minutes before testing.



Cyclin E1 Antibody Protein Microarray Validation. Analysis of a HuProt(TM) microarray containing more than 19,000 full-length human proteins using Cyclin E1 Antibody / G1-S Cell Cycle Regulator Antibody (clone CCNE1/2460) demonstrates exceptional target specificity for Cyclin E1 (CCNE1). Cyclin E1 was identified as the top-ranked target with a Z-score of 122.06 and an S-score of 110.17, indicating highly selective recognition of the intended antigen with minimal off-target reactivity. The substantial separation between the Cyclin E1 signal and all other proteins on the array supports the foremost specificity of clone CCNE1/2460 and provides strong independent validation for its use in studies of cell cycle regulation, DNA replication, cellular proliferation, and G1-S checkpoint control.



SDS-PAGE analysis of purified, BSA-free Cyclin E1 antibody (clone CCNE1/2460) as confirmation of integrity and purity.



Cyclin E1 Antibody Human Jurkat Cell WB. Western blot analysis of human Jurkat cell lysate using Cyclin E1 Antibody / G1-S Cell Cycle Regulator Antibody demonstrates a prominent immunoreactive band at approximately 50 kDa, consistent with the predicted molecular weight of Cyclin E1 (CCNE1). Cyclin E1 is a key regulator of the G1-S transition that promotes DNA replication and cell cycle progression through formation of active complexes with CDK2. The observed band is consistent with expression of Cyclin E1 in Jurkat cells and supports its established role in regulating cellular proliferation, growth control, and progression through critical cell cycle checkpoints. A faint lower molecular weight band is also present and may represent a degradation product or minor antibody-reactive species.

Description

Cyclin E1 Antibody / G1-S Cell Cycle Regulator Antibody recognizes Cyclin E1 (CCNE1), a regulatory protein that plays a critical role in controlling progression through the G1-S transition of the cell cycle. Cyclin E1 functions by forming active complexes with cyclin-dependent kinase 2 (CDK2), initiating molecular events required for entry into S phase and the onset of DNA replication. Through regulation of cell cycle progression, Cyclin E1 influences cellular proliferation, tissue growth, embryonic development, and maintenance of normal cellular homeostasis. Because precise control of G1-S progression is essential for normal cell division, Cyclin E1 has become one of the most widely studied regulators of cell cycle biology.

Cyclin E1 expression normally fluctuates during cell cycle progression, reaching peak levels during late G1 phase before declining as cells progress through DNA synthesis. This tightly controlled pattern of expression helps ensure accurate replication of the genome and proper coordination of cellular proliferation. Disruption of Cyclin E1 regulation can alter cell cycle control mechanisms and contribute to abnormal proliferative activity. Consequently, researchers frequently evaluate Cyclin E1 expression when investigating cell cycle dynamics, proliferative status, and growth-regulatory signaling pathways.

Beyond its role in normal tissue growth, Cyclin E1 has attracted substantial interest in cancer research due to its association with uncontrolled cellular proliferation. Elevated Cyclin E1 expression has been reported in numerous malignancies and is often examined as part of studies investigating tumor biology, cell cycle dysregulation, and mechanisms of oncogenic transformation. As a central regulator of DNA replication entry, Cyclin E1 serves as an important marker for understanding the molecular pathways that govern cellular growth and division.

Cyclin E1 also contributes to developmental processes that require tightly regulated cellular expansion and differentiation. During embryogenesis and tissue renewal, appropriate Cyclin E1 activity supports controlled proliferation of progenitor and differentiating cell populations. Researchers commonly investigate Cyclin E1 expression in studies of developmental biology, stem cell regulation, regenerative processes, and cell fate determination. Its role at a critical checkpoint of the cell cycle makes Cyclin E1 an informative marker of proliferative potential and growth control.

At NSJ Bioreagents, we provide highly validated antibodies for cell biology, cancer research, developmental biology, and cell cycle studies. Cyclin E1 Antibody / G1-S Cell Cycle Regulator Antibody is useful for investigating DNA replication, cellular proliferation, G1-S checkpoint control, developmental growth, and cell cycle regulation. Clone CCNE1/2460 has been validated by western blotting, immunohistochemistry, and protein microarray specificity analysis, providing researchers with a reliable tool for studying this important regulator of cellular division and proliferative signaling pathways.

Cyclin E1 regulates the G1-S cell cycle transition and cellular proliferation, making it an important target within our Cell Biology Antibodies collection.

Application Notes

Optimal dilution of the Cyclin E1 Antibody / G1-S Cell Cycle Regulator Antibody should be determined by the researcher.

1. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

Recombinant human partial protein (within amino acids 10-176) was used as the immunogen for the Cyclin E1 antibody.

Storage

Store the Cyclin E1 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

CCNE1 Antibody, G1-S Cell Cycle Regulator Antibody, Cyclin E Antibody, Cell Cycle Progression Protein Antibody, DNA Replication Regulatory Protein Antibody, Cellular Proliferation Marker Antibody

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