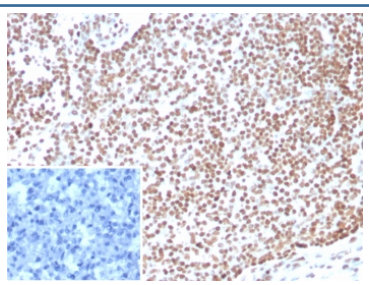
E2F4 Antibody / Cell Cycle Regulation and Transcriptional Repressor Marker [clone E2F4/4224] (V4434)

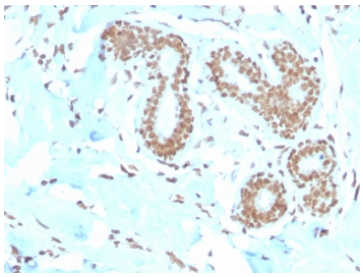
Catalog No.	Formulation	Size
V4434-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4434-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4434SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

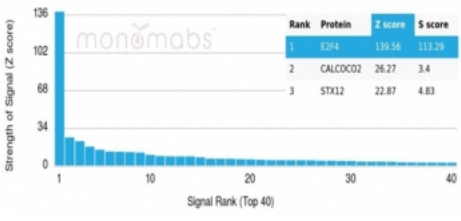
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	E2F4/4224
Purity	Protein A/G affinity
UniProt	Q16254
Localization	Nucleus
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 minutes at RT
Limitations	This E2F4 Antibody / Cell Cycle Regulation and Transcriptional Repressor Marker is available for research use only.



E2F4 Antibody Lymph Node IHC. Immunohistochemistry analysis of FFPE human lymph node tissue stained with E2F4 antibody detecting E2F transcription factor 4, clone E2F4/4224. Strong nuclear staining is observed in lymphoid cells, consistent with the role of E2F4 as a transcriptional regulator within the RB pathway controlling cell cycle progression and gene repression. The staining highlights dense lymphocyte populations, while stromal areas show comparatively reduced signal. The inset shows a PBS-only negative control processed without primary antibody, confirming minimal non-specific background staining. Hematoxylin counterstain highlights nuclei in blue. HIER: boil tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 20 min and allow to cool before testing.



E2F4 Antibody Breast Carcinoma IHC. Immunohistochemistry analysis of FFPE human breast carcinoma tissue stained with E2F4 antibody detecting E2F transcription factor 4, clone E2F4/4224. Tumor epithelial cells show strong nuclear staining, consistent with localization of E2F4 as a transcriptional regulator within the RB pathway controlling cell cycle progression and gene repression. The staining highlights malignant glandular structures, while surrounding stromal regions show comparatively reduced signal. Hematoxylin counterstain highlights nuclei in blue. HIER: boil tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 20 min and allow to cool before testing.



E2F4 Antibody HuProt Microarray. Analysis of a HuProt(TM) microarray containing more than 19,000 full-length human proteins using E2F4 antibody detecting E2F transcription factor 4, clone E2F4/4224. The antibody shows a strong and specific signal for E2F4 with a high Z-score and a significant separation from the next highest targets, resulting in an S-score greater than 2.5, consistent with high target specificity. Z-score represents the signal intensity in standard deviations above the array mean, while S-score reflects the difference between the top-ranked target and the next highest signal, indicating relative binding specificity of the monoclonal antibody.

Description

E2F transcription factor 4 (E2F4) is a member of the E2F family of transcription factors that play central roles in regulating cell cycle progression, DNA synthesis, and cellular proliferation. E2F4 functions predominantly as a transcriptional repressor and is a key component of the retinoblastoma (RB) pathway, where it contributes to the control of genes required for entry into the S phase of the cell cycle. E2F4 Antibody, clone E2F4/4224, is a mouse monoclonal antibody developed to detect this important nuclear regulator of cell cycle-dependent transcription.

E2F4 forms complexes with pocket proteins such as p107 and p130, which facilitate its localization to the nucleus and its ability to repress transcription of target genes involved in cell cycle progression. In quiescent and differentiated cells, E2F4 is typically found in the nucleus bound to these regulatory proteins, where it suppresses genes required for proliferation. Upon cell cycle activation, changes in pocket protein interactions alter E2F activity, enabling transcriptional programs that drive DNA replication and cell division.

Unlike activating E2F family members such as E2F1, E2F4 lacks a strong transactivation domain and instead primarily functions to maintain cells in a non-proliferative or differentiated state. It is widely expressed across tissues and is particularly important in controlling the balance between proliferation and differentiation. This role makes E2F4 a valuable marker for studying cell cycle control, tissue homeostasis, and developmental processes.

E2F4 localization can vary between nuclear and cytoplasmic compartments depending on cell type and cell cycle status, reflecting its dynamic regulation. Its association with the DREAM complex further integrates E2F4 into broader transcriptional repression networks that coordinate cell cycle exit and maintenance of quiescence. These features support the use of an E2F4 Antibody for investigating transcriptional control mechanisms and cell cycle regulation across diverse biological systems.

Altered regulation of E2F4 and associated pathways has been implicated in cancer and other proliferative disorders. Disruption of RB pathway components can lead to deregulated E2F activity, contributing to uncontrolled cell division. The ability to detect E2F4 expression and localization provides insight into these regulatory networks, supporting studies of tumor biology, differentiation, and cell cycle-dependent gene expression.

This antibody is part of a broader antibody panel offered by NSJ Bioreagents.

Application Notes

Optimal dilution of the E2F4 Antibody / Cell Cycle Regulation and Transcriptional Repressor Marker should be determined

by the researcher.

Immunogen

A recombinant partial protein sequence (within amino acids 1-100) from the human protein was used as the immunogen for the E2F4 antibody.

Storage

Aliquot the E2F4 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

E2F4 antibody, E2F transcription factor 4 antibody, E2F-4 antibody, p107 binding transcription factor antibody, RB pathway transcription factor antibody, clone E2F4/4224 antibody

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