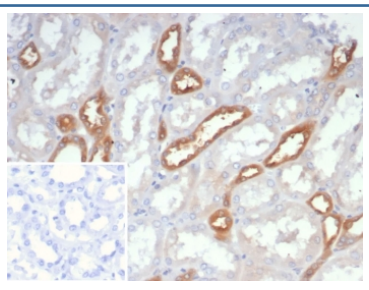
NDPK-B Antibody / Nucleoside diphosphate kinase B / NME2 [clone NME2/6436] (V5771)

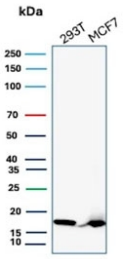
Catalog No.	Formulation	Size
V5771-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5771-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5771SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

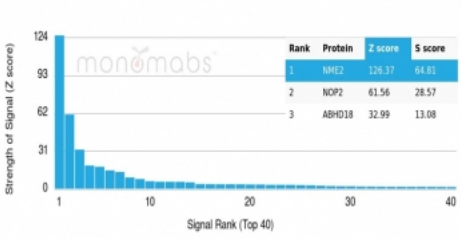
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	NME2/6436
Purity	Protein G affinity
UniProt	P22392
Localization	Cytoplasm, Nucleus
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml Western Blot : 2-4ug/ml
Limitations	This NDPK-B antibody is available for research use only.



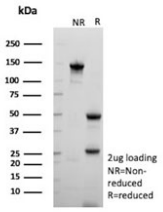
IHC analysis of NDPK-B / NME2 antibody in human kidney tissue. Formalin-fixed, paraffin-embedded human kidney shows cytoplasmic HRP-DAB brown chromogenic staining predominantly in renal tubular epithelial cells, while glomerular structures exhibit minimal staining. Clone NME2/6436 demonstrates specific signal following heat-induced epitope retrieval in pH 9 10mM Tris with 1mM EDTA for 20 min. The inset negative control using PBS instead of primary antibody shows no specific staining.



Western blot testing of human 293T and MCF7 cell lysate with NDPK-B antibody (clone NME2/6436). Predicted molecular weight ~17 kDa.



Analysis of HuProt(TM) microarray containing more than 19,000 full-length human proteins using NDPK-B antibody (clone NME2/6436). These results demonstrate the foremost specificity of the NME2/6436 mAb. Z- and S- score: The Z-score represents the strength of a signal that an antibody (in combination with a fluorescently-tagged anti-IgG secondary Ab) produces when binding to a particular protein on the HuProt(TM) array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If the targets on the HuProt(TM) are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-scores. The S-score therefore represents the relative target specificity of an Ab to its intended target.



SDS-PAGE analysis of purified, BSA-free NDPK-B antibody (clone NME2/6436) as confirmation of integrity and purity.

Description

NDPK-B antibody recognizes Nucleoside diphosphate kinase B, a ubiquitously expressed cytoplasmic and nuclear enzyme encoded by the human NME2 gene. NDPK-B antibody detects a member of the nucleoside diphosphate kinase family that catalyzes the transfer of gamma-phosphates from nucleoside triphosphates to nucleoside diphosphates, thereby maintaining intracellular pools of nucleotides required for DNA replication, RNA transcription, and cellular metabolism. NDPK-B is primarily localized to the cytoplasm but may also be detected in the nucleus depending on cellular context.

NDPK-B antibody, also referred to as NME2 antibody and Non-metastatic cells 2 protein antibody in the literature, targets a highly conserved enzyme that functions as a hexameric protein complex. NDPK-B contains the characteristic histidine residue within its active site that becomes transiently phosphorylated during catalytic activity. Through this phosphotransfer mechanism, NDPK-B supports nucleotide homeostasis and participates in regulation of signaling pathways that rely on GTP availability.

The NME2 gene is located on chromosome 17q21.3 and is part of the NME gene family, which includes NME1 and other related isoforms. Members of this family have been implicated in diverse biological processes including metastasis suppression, transcriptional regulation, and signal transduction. NDPK-B has been shown to interact with transcription factors and to influence gene expression through regulatory protein-protein interactions.

In addition to its enzymatic role in nucleotide metabolism, NDPK-B has been associated with regulation of cell proliferation, differentiation, and apoptosis. Altered expression of NME family members has been reported in several malignancies, where expression levels may correlate with tumor progression or metastatic potential depending on tumor type and cellular context.

NDPK-B participates in pathways influencing cytoskeletal organization, vesicle trafficking, and receptor signaling, partly through modulation of small GTP-binding proteins. Its broad expression across tissues reflects its fundamental role in maintaining cellular nucleotide balance.

Clone NME2/6436 is a monoclonal antibody designed to target NDPK-B protein in research applications. An antibody to NDPK-B is suitable for detecting NME2 expression and for investigating nucleotide metabolism, signal transduction, and tumor biology in relevant experimental systems.

Application Notes

Optimal dilution of the NDPK-B antibody should be determined by the researcher.

Immunogen

A recombinant full-length human Nucleoside diphosphate kinase B protein was used as the immunogen for the NDPK-B antibody.

Storage

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