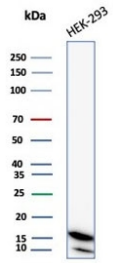
NDKB Antibody / Nucleoside diphosphate kinase B / NME2 [clone NME2/6437] (V4519)

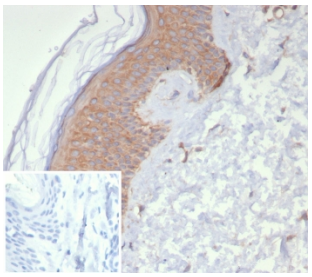
Catalog No.	Formulation	Size
V4519-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4519-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4519SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

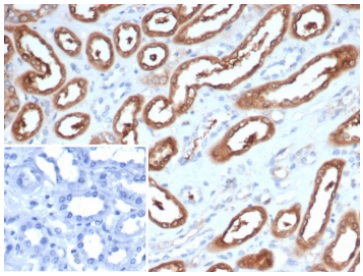
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	NME2/6437
Purity	Protein A/G affinity
UniProt	P22392
Localization	Cytoplasm, Nucleus
Applications	Western Blot : 1-2ug/ml Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This NME2 antibody is available for research use only.



Western blot testing of human MCF-7 cell lysate with NDKB antibody (clone NME2/6437). Predicted molecular weight ~17 kDa.



IHC staining of FFPE human kidney tissue with NDKB antibody (clone NME2/6437). Inset: PBS used in place of primary Ab (secondary Ab negative control). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



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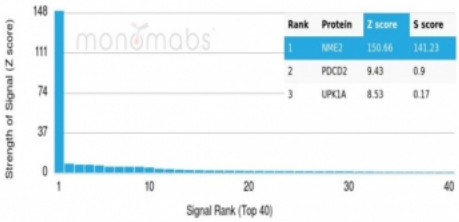

Analysis of a HuProt(TM) microarray containing more than 19,000 full-length human proteins using NDKB antibody (clone NME2/6437). Z- and S- Score: The Z-score represents the strength of a signal that a monoclonal antibody (in combination with a fluorescently-tagged anti-IgG secondary antibody) produces 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 targets on 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-score. S-score therefore represents the relative target specificity of a mAb to its intended target. A mAb is considered to specific to its intended target, if the mAb has an S-score of at least 2.5. For example, if a mAb binds to protein X with a Z-score of 43 and to protein Y with a Z-score of 14, then the S-score for the binding of that mAb to protein X is equal to 29.

Description

NDKB antibody recognizes Nucleoside diphosphate kinase B, a ubiquitously expressed enzyme encoded by the human NME2 gene that is essential for maintaining intracellular nucleotide balance. NDKB antibody detects a cytoplasmic and nuclear protein that catalyzes the reversible transfer of gamma-phosphates between nucleoside triphosphates and diphosphates, supporting cellular pools of ATP, GTP, CTP, and UTP required for DNA replication, RNA transcription, and signal transduction. Through this phosphotransfer activity, NDKB contributes to energy metabolism and nucleotide homeostasis across diverse cell types.

NDKB antibody, also referred to as NME2 antibody and nm23-H2 antibody in the literature, targets a member of the NME family of nucleoside diphosphate kinases. The protein assembles into a functional hexamer and contains a conserved histidine residue within its catalytic site that becomes transiently phosphorylated during enzymatic activity. This conserved structural architecture allows NDKB to regulate GTP-dependent signaling processes, including those involving small GTPases.

The NME2 gene is located on chromosome 17q21.3 and is closely related to NME1, another member of the metastasis-associated nm23 gene family. Beyond its enzymatic function, NDKB has been implicated in transcriptional regulation and protein-protein interactions that influence cell proliferation and differentiation. Its role in modulating signaling cascades extends its biological relevance beyond nucleotide metabolism alone.

Altered expression of NME family proteins has been described in several malignancies, where changes in expression may correlate with tumor progression or metastatic behavior depending on tumor type. Because NDKB participates in pathways influencing cytoskeletal organization, vesicle trafficking, and receptor-mediated signaling, it has been

investigated in cancer research and cell motility studies.

NDKB expression is widespread in normal tissues, reflecting its fundamental metabolic role. Its consistent cytoplasmic distribution, with occasional nuclear localization, makes NDKB antibody useful for examining nucleotide metabolism and regulatory signaling pathways in both normal and transformed cells.

Clone NME2/6437 is a monoclonal antibody developed to target NDKB protein in research applications. An antibody to NDKB is suitable for detecting Nucleoside diphosphate kinase B expression and for studying cellular metabolism and signaling regulation in relevant experimental systems.

Application Notes

Optimal dilution of the NDKB antibody should be determined by the researcher.

Immunogen

Recombinant full-length human protein was used as the immunogen for the NDKB antibody.

Storage

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