

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human NM23-H2 in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human NM23-H1 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human NM23-H2 Ala2-Glu152 Accession # P22392
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunocytochemistry	5-15 µg/mL	See Below

DATA

<p>Western Blot</p> <p>Detection of Human NM23-H2 by Western Blot. Western blot shows lysates of Capan-1 human pancreatic adenocarcinoma cell line and MCF-7 human breast cancer cell line. PVDF Membrane was probed with 1 µg/mL of Sheep Anti-Human NM23-H2 Polyclonal Antibody (Catalog # AF6665) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). Specific bands were detected for NM23-H2 at approximately 20 and 23 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.</p>	<p>Immunocytochemistry</p> <p>NM23-H2 in MCF-7 Human Cell Line. NM23-H2 was detected in immersion fixed MCF-7 human breast cancer cell line using Sheep Anti-Human NM23-H2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6665) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red; Catalog # NL010) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.</p>
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PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

NM23-H2 or NME-2 (non-metastatic cell 2; also Nucleoside diphosphate kinase B, nm23-H2/B, NDPK-B and PUF) is a 17-19 kDa class 1 member of the NME/NDPK family of molecules. It is widely expressed, found in both cytosol and nucleus, and participates in multiple activities. In conjunction with nm23-H1, NME-2 forms homo- and heterohexamers (three dimers or two trimers) that mediate the transfer of phosphate from ATP to nucleoside diphosphates. It also serves as a transcriptional regulator of genes such as c-myc and PDGF-A. Human NME-2 is 152 amino acids (aa) in length. It contains a kinase region (aa 5-134), two potential phosphorylation sites (Tyr52 and Thr94), a phosphohistidine residue at position 118, and multiple lysine acetylation sites. There is one potential NME-2 splice form that shows a six aa substitution for aa 77-152. The genes for NME-1 and NME-2 are adjacent, and an unusual splicing event generates a 33 kDa fusion protein (NM23-LV) that is composed of aa 1-114 of NME-1 plus a Thr insert that is N-terminally coupled to full-length NME-2. Full-length human NME-2 shares 88% and 98% aa identity with human NME-1 and mouse NME-2, respectively.