

## DESCRIPTION

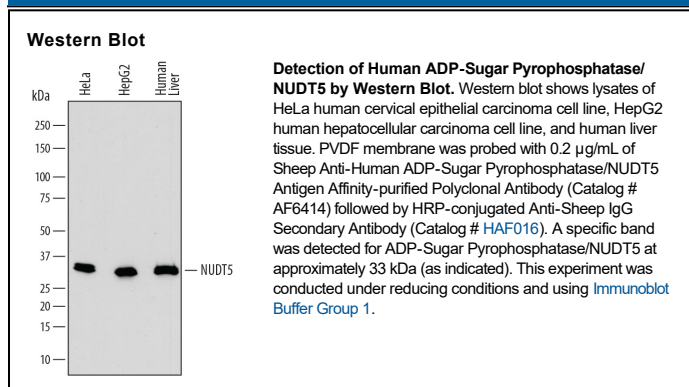
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human ADP-Sugar Pyrophosphatase/NUDT5 in direct ELISAs and Western blots.
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human ADP-Sugar Pyrophosphatase/NUDT5 Glu2-Phe219 Accession # Q9UJK9
<b>Formulation</b>	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
<b>Western Blot</b>	0.2 µg/mL	See Below

## DATA



## PREPARATION AND STORAGE

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.2 mg/mL.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

ADP-Sugar Pyrophosphatase (NUDT-5, Nucleoside diphosphate-linked moiety X motif 5; also YSA1H and 8-oxo-dGDP phosphatase) is a member of the Nudix hydrolase family of proteins. Although the predicted MW of NUDT-5 is 24 kDa, it runs anomalously at 32-36 kDa in SDS-Page. NUDT-5 is a widely expressed intracellular homodimer that has at least two functions. First, it possesses pyrophosphatase activity that prevents nonenzymatic ribosylation of proteins, and second, it hydrolyzes 8-oxoGDP (plus 8-OH-dADP), thus removing an oxidized nucleoside from the nucleotide pool and its potential for incorporation into either DNA or RNA. Such incorporation likely results in transcriptional or translational errors. Human NUDT-5 is 219 amino acids (aa) in length (SwissProt #:Q9UJK9). It contains an N-terminal substrate binding region (aa 28-51), a Nudix hydrolase domain (aa 57-197) and an extended C-terminal  $\alpha$ -helix (aa 211-219). NUDT-5 is acetylated on Met1, Lys42, Lys210, and Lys218, and phosphorylated on Tyr74. There are two isoform variants, one that shows a deletion of aa 163-165, and another that contains a 13 aa substitution for aa 164-219. Full-length human and mouse NUDT-5 share 82% aa sequence identity.