

#### 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 # Q9UKK9
<b>Conjugate</b>	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
<b>Formulation</b>	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide
*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.	

#### 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.

**Western Blot** Optimal dilution of this antibody should be experimentally determined.

#### PREPARATION AND STORAGE

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

#### 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 #:Q9UKK9). 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.

#### PRODUCT SPECIFIC NOTICES

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