

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human ADP-Sugar Pyrophosphatase/NUDT5 in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human ADP-Sugar Pyrophosphatase/NUDT5 Glu2-Phe219 Accession # Q9UKK9
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	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

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	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 α -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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