

DESCRIPTION

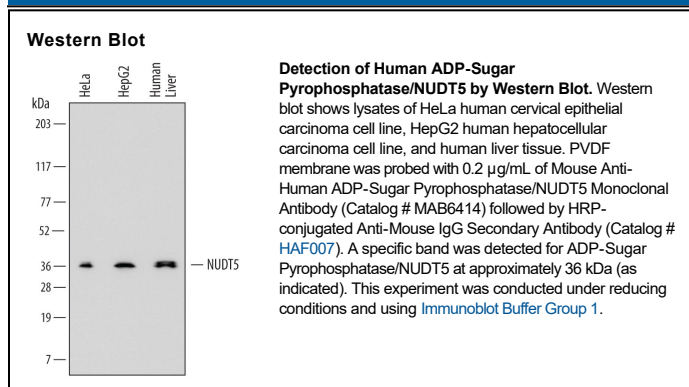
| | |
|---------------------------|---|
| Species Reactivity | Human |
| Specificity | Detects human ADP-Sugar Pyrophosphatase/NUDT5 in direct ELISAs. |
| Source | Monoclonal Mouse IgG _{2B} Clone # 739044 |
| Purification | Protein A or G purified from hybridoma culture supernatant |
| Immunogen | <i>E. coli</i> -derived recombinant human ADP-Sugar Pyrophosphatase/NUDT5 Glu2-Phe219 Accession # Q9UUK9 |
| 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 | 0.2 µg/mL | See Below |

DATA



PREPARATION AND STORAGE

| | |
|--------------------------------|--|
| Reconstitution | Sterile PBS to a final concentration of 0.5 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

ADP-Sugar Pyrophosphatase (NUDT5) is a member of the nudix superfamily of enzymes. Members of this family are pyrophosphohydrolases that act upon substrates with the general structure of a nucleoside (Nu) diphosphate (di) linked to another moiety, X (NDP-X) to yield NMP plus P-X (1). Human NUDT5 is a homodimeric enzyme present in the cytosol of most cell types (2). Glu166 and three magnesium ions are important for stabilizing the transition state during the hydrolysis of ADPR (3). NUDT5 has been suggested to play a role in regulating the intracellular levels of ADPR by NO activation through ADP-ribosylation at cysteine residues of the enzyme in macrophages (4). It also may play defensive role against the mutagenesis induced by oxidized deoxyribonucleosides (5, 6).

References:

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4. Yu, H.N. *et al.* (2007) Biochem. Biophys. Res. Comm. **354**:764.
5. Hori, M. *et al.* (2010) Free Radic. Biol. Med. **48**:1197.
6. Kamiya, H. *et al.* (2009) DNA Repair (Amst) **8**:1250.