

NUDT5 Protein, Human, Recombinant (His)

General Information

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| Synonyms: | hYSAH1;YSAH1;nudix (nucleoside diphosphate linked moiety X)-type motif 5;YSA1;YSA1H |
| Protein Construction: | A DNA sequence encoding the human NUDT5 (Q9UKK9) (Glu2-Phe219) was expressed with a polyhistidine tag at the N-terminus. Predicted N terminal: His |
| Species: | Human |
| Expression Host: | E. coli |
| Accession: | Q9UKK9 |
| Molecular Weight: | 26.3 kDa (predicted); 35 kDa (reducing conditions) |

QC Testing

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| Biological Activity: | Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first. |
| Purity: | > 90 % as determined by SDS-PAGE |
| Endotoxin: | Please contact us for more information. |
| Formulation: | Lyophilized from a solution filtered through a 0.22 µm filter, containing 50 mM Tris, 10% glycerol, pH 8.0. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization. |

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

NUDT5 (Nudix Hydrolase 5) is a Protein Coding gene. This gene belongs to the Nudix (nucleoside diphosphate linked moiety X) hydrolase superfamily. The encoded enzyme catalyzes the hydrolysis of modified nucleoside diphosphates. ADP-sugar Pyrophosphatase, also known as NUDT5, eliminates toxic nucleotide derivatives from the cell and regulates the levels of important signaling nucleotides and their metabolites. It is widely expressed in the liver, skin, and other tissues. NUDT5 functions as a MutT-related protein and catalyzes the hydrolysis of 8-

oxoGDP to 8-oxoGMP, thereby preventing misincorporation of 8-oxoGua into RNA. NUDT5 may play significant roles in regulating the G1-S transition in mammalian cells. It can also hydrolyze other nucleotide sugars with low activity.

Reference

- Ishibashi T. et al., 2004, EMBO Rep. 4 (5): 479-8.
Gerhard DS. et al., 2004, Genome Res. 14 (10B): 2121-7.
Rush J. et al., 2005, Nat Biotechnol. 23 (1): 94-101.
Kamiya H. et al., 2009, DNA Repair. 8 (10): 1250-4.

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