Datasheet for ABIN7550197

# NUDT3 Protein (AA 1-172) (His tag)

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## Overview

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| Quantity: | 1 mg |
| Target: | NUDT3 |
| Protein Characteristics: | AA 1-172 |
| Origin: | Human |
| Source: | HEK-293 Cells |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This NUDT3 protein is labelled with His tag. |

## Product Details

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| Purpose: | Custom-made recombinant NUDT3 Protein expressed in mammalian cells. |
| Sequence: | MMKLKSNQTR TYDGDGYKKR AACLCFRSES EEEVLLVSSS RHPDRWIVPG GGMEPEEEPS VAAVREVCEE AGVKGTLGRL VGIFENQERK HRTYVYVLIV TEVLEDWEDS VNIGRKREWF KIEDAIKVLQ YHKPVQASYF ETLRQGYSAN NGTPVVATTY SVSAQSSMSG IR **Sequence without tag. The proposed Purification-Tag is based on experiences with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.** |
| Specificity: | If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer. |
| Characteristics: | Key Benefits:<br>• Made to order protein - from design to production - by highly experienced protein experts.<br>• Protein expressed in mammalian cells and purified in one-step affinity chromatography<br>• The optimized expression system ensures reliability for intracellular, secreted and |

## Product Details

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| | transmembrane proteins.<br>• State-of-the-art algorithm used for plasmid design (Gene synthesis).<br><br>This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.<br><br>If you are not interested in a full length protein, please contact us for individual protein fragments.<br><br>The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified. |
| Purity: | > 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC) |
| Grade: | custom-made |

## Target Details

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| Target: | NUDT3 |
| Alternative Name: | NUDT3 (NUDT3 Products) |
| Background: | Diphosphoinositol polyphosphate phosphohydrolase 1 (DIPP-1) (EC 3.6.1.52) (Diadenosine hexaphosphate hydrolase) (Ap6A hydrolase) (EC 3.6.1.61) (Endopolyphosphatase) (EC 3.6.1.10) (Nucleoside diphosphate-linked moiety X motif 3) (Nudix motif 3) (m7GpppN-mRNA hydrolase) (EC 3.6.1.62) (m7GpppX diphosphatase) (EC 3.6.1.59),FUNCTION: Cleaves a beta-phosphate from the diphosphate groups in PP-InsP5 (diphosphoinositol pentakisphosphate) and [PP]2-InsP4 (bisdiphosphoinositol tetrakisphosphate), suggesting that it may play a role in signal transduction (PubMed:12370170, PubMed:9822604, PubMed:10585413). InsP6 (inositol hexakisphosphate) is not a substrate (PubMed:9822604). Acts as a negative regulator of the ERK1/2 pathway (By similarity). Also able to catalyze the hydrolysis of dinucleoside oligophosphates, with diadenosine 5',5'''-P1,P6-hexaphosphate (Ap6A) and diadenosine 5',5'''-P1,P5-pentaphosphate (Ap5A) being the preferred substrates (PubMed:12370170, PubMed:10419486). The major reaction products are ADP and p4a from Ap6A and ADP and ATP from Ap5A (PubMed:12370170). Also able to hydrolyze 5-phosphoribose 1-diphosphate (PubMed:12370170). Acts as a decapping enzyme that modulates the stability of a subset of mRNAs implicated in cell motility (PubMed:26932476). Hydrolyzes monomethylated capped RNA after both the alpha- and beta-phosphates generating m7GMP + ppRNA and m7GDP + pRNA (PubMed:32727897). Can hydrolyze unmethylated capped RNAs (By similarity). Divalent |

## Target Details

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| | cations zinc, magnesium and manganese determine its substrate specificity (PubMed:34788624). Exhibits diphosphoinositol polyphosphate phosphohydrolase in the presence of magnesium ions, diadenosine hexaphosphate hydrolase activity in the presence of manganese ions and endopolyphosphatase activity in the presence of zinc ions (PubMed:34788624). Plays an important role in limiting DNA damage and maintaining cell survival upon oxidative stress via its endopolyphosphatase activity (PubMed:34788624). {ECO:0000250\|UniProtKB:Q9JI46, ECO:0000269\|PubMed:10419486, ECO:0000269\|PubMed:10585413, ECO:0000269\|PubMed:12370170, ECO:0000269\|PubMed:34788624, ECO:0000269\|PubMed:9822604, ECO:0000305\|PubMed:26932476}. |
| Molecular Weight: | 19.5 kDa |
| UniProt: | O95989 |

## Application Details

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| Application Notes: | We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though. |
| Restrictions: | For Research Use only |

## Handling

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| Format: | Liquid |
| Buffer: | The buffer composition is at the discretion of the manufacturer. |
| Handling Advice: | Avoid repeated freeze-thaw cycles. |
| Storage: | -80 °C |
| Storage Comment: | Store at -80°C. |
| Expiry Date: | 12 months |