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## Product Data Sheet

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Product Name: NUDT1 Human  
 Cat. No.: GP22019  
 Batch No.: 1

### Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	7;8-dihydro-8-oxoguanine triphosphatase; 8-oxo-dGTPase; Nucleoside diphosphate-linked moiety X motif 1; Nudix motif 1; NUDT1; MTH1.		
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MGASRLYTLV LVLQPQRVLL GMKKRFGAG RWNGFGGKVQ EGETIEDGAR RELQEESGLT VDALHKVGQI VFEFVGEPEL MDVHVCTDS IQGTPVESDE MRPCWFQLDQ IPFKDMWPDD SYWFPLLLQK KKFHGYFKFQ GQDTILDYTL REVDTV.		
Formulation	The NUDT1 solution (1mg/ml) contains 20mM Tris-HCl buffer (pH8.0), 10% glycerol, 2mM DTT and 100mM NaCl.		

### Introduction

NUDT1 is an enzyme that hydrolyzes oxidized purine nucleoside triphosphates, such as 8-oxo-dGTP, 8-oxo-dATP, 2-hydroxy-dATP, and 2-hydroxy rATP, to monophosphates, thereby preventing misincorporation of 8-oxo-dGTP into DNA thus preventing A:T to C:G transversions. NUDT1 is found mostly in the cytoplasm, with some in the mitochondria, suggesting that it is involved in the sanitization of nucleotide pools both for nuclear and mitochondrial genomes. Moreover, NUDT1 is expressed at much higher levels in proliferating cells than in resting cells. Misincorporation of oxidized nucleoside triphosphates into DNA/RNA during replication and transcription can cause mutations which may result in carcinogenesis or neurodegeneration.

### Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

### Background

**Caution: Product has not been fully validated for medical applications. For research use only.**

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NUDT1 Human Recombinant fused with a 20 amino acid His tag at N-terminus produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 176 amino acids (1-156 a.a.) and having a molecular mass of 20.1kDa. The NUDT1 is purified by proprietary chromatographic techniques.

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