

NUDT1 Human

Description: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.

Catalog #:ENPS-017

For research use only.

Synonyms:7,8-dihydro-8-oxoguanine triphosphatase, 8-oxo-dGTPase, Nucleoside diphosphate-linked moiety X motif 1, Nudix motif 1, NUDT1, MTH1.

Source:Escherichia Coli.

Physical Appearance:Sterile Filtered colorless solution.

Amino Acid Sequence:MGSSHHHHHH SSGLVPRGSH MGASRLYTLV LVLQPQRVLL
GMKKRGFGAG RWNGFGGKVQ EGETIEDGAR RELQEESGLT VDALKVGGQI VFEFVGEPEL
MDVHVFCFDS IQGTPVESDE MRPCWFQLDQ IPFKDMWPDD SYWFPPLLQK KKFHGYFKFQ
GQDTILDYTL REVDTV.

Purity:Greater than 95.0% as determined by SDS-PAGE.

Formulation:

The NUDT1 solution (1 mg/ml) contains 20mM Tris-HCl buffer (pH8.0), 10% glycerol, 2mM DTT and 100mM NaCl.

Stability:

NUDT1 should be stored desiccated below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Usage:

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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.

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