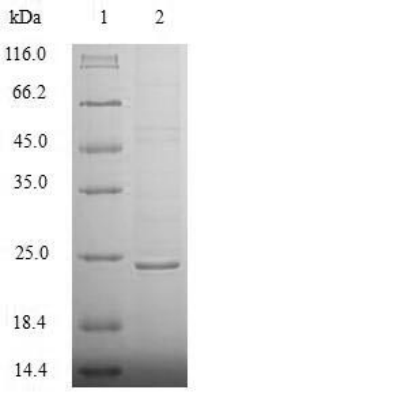
Recombinant Human 7,8-dihydro-8-oxoguanine triphosphatase (NUDT1)

Product Code	CSB-BP016154HU
Relevance	Antimutagenic. Acts as a sanitizing enzyme for oxidized nucleotide pools, thus suppressing cell dysfunction and death induced by oxidative stress. Hydrolyzes 8-oxo-dGTP, 8-oxo-dATP and 2-OH-dATP, thus preventing misincorporation of oxidized purine nucleoside triphosphates into DNA and subsequently preventing A:T to C:G and G:C to T:A transversions. Able to hydrolyze also the corresponding ribonucleotides, 2-OH-ATP, 8-oxo-GTP and 8-oxo-ATP. Does not play a role in U8 snoRNA decapping activity. Binds U8 snoRNA.
Abbreviation	Recombinant Human NUDT1 protein
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P36639
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	MSGISPQQMGEPEGSWSGKNPGTMGASRLYTLVLVLQPQRVLLGMKKRGFG AGRWNGFGGKVQEGETIEDGARRELQEESGLTVDALHKVGQIVFEFVGEPEL MDVHVFCTDSIQGTPVESDEMRPCWFQLDQIPFKDMWPDDSYWFPLLLQKK KFHGYFKFQGQDTILDYTLREVDTV
Research Area	others
Source	Baculovirus
Target Names	NUDT1
Protein Names	2-hydroxy-dATP diphosphatase (EC:3.6.1.56) 8-oxo-dGTPase Nucleoside diphosphate-linked moiety X motif 1
Expression Region	19-197aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 10xHis-tagged
Mol. Weight	22.8 kDa
Protein Length	Full Length of Mature Protein
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

The recombinant Human NUDT1 was expressed with the amino acid range of 19-197. The expected molecular weight for the NUDT1 protein is calculated to be 22.8 kDa. The NUDT1 protein was expressed in baculovirus. The N-terminal 10xHis tag was fused into the coding gene segment of NUDT1, making it easier to detect and purify the NUDT1 recombinant protein in the later stages of expression and purification.

The current primary research area for NUDT1 (Oxidized purine nucleoside triphosphate hydrolase) involves the regulation of cellular nucleotide metabolism. Within cells, NUDT1 participates in maintaining nucleotide balance and genomic stability by hydrolyzing oxidized purine nucleoside triphosphates. Its role in DNA repair and antioxidant defense is of particular interest, especially its potential impact on the occurrence and development of diseases such as cancer. Researchers also focus on the association between NUDT1 and physiological processes like inflammation and metabolic regulation, providing a research foundation for exploring new therapeutic strategies.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

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