Data Sheet (Cat.No.TMPY-03508)

TargetMol

XTP3TPA Protein, Human, Recombinant (His)

General Information

Synonyms:	XTP3TPA;dCTP pyrophosphatase 1;RS21C6;CDA03
Protein Construction:	A DNA sequence encoding the mature form of human XTP3TPA(NP_077001.1) (Met1-Thr170) was expressed with a polyhistidine tag at the N-terminus. Predicted N terminal: His
Species:	Human
Expression Host:	E. coli
Accession:	Q9H773
Molecular Weight:	20.5 kDa (predicted); 21 kDa (reducing conditions)

QC Testing

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, 100 mM NaCl, 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

DCTPP1 hydrolyzes deoxynucleoside triphosphates (dNTPs) to the corresponding nucleoside monophosphates. It has a strong preference for modified dCTP. DCTPP1's activity is highest with 5-iodo-dCTP, followed by 5-bromo-dCTP, unmodified dCTP, 5-methyl-dCTP and 5-chloro-dCTP. DCTPP1 also hydrolyzes 2-chloro-dATP and 2-hydroxy-dATP with lower efficiency, and has even lower activity with unmodified dATP, dTTP and dUTP (in vitro). DCTPP1 does not hydrolyze ATP, UTP, ITP, GTP, dADP, dCDP or dGTP. It may protect DNA or RNA against the

incorporation of non-canonical nucleotide triphosphates. DCTPP1 may also protect cells against inappropriate methylation of CpG islands by DNA methyltransferases.

Reference

Stelzl U. et al., 2005, Cell. 122 (6): 957-68.
Strausberg RL. et al., 2003, Proc Natl Acad Sci. 99 (26): 16899-903.
Moroz OV. et al., 2005, J Mol Biol. 347 (2): 243-55.