OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for PH306896

NUDT16 (NM_152395) Human Mass Spec Standard

Product data:

Product Type:	Mass Spec Standards
Description:	NUDT16 MS Standard C13 and N15-labeled recombinant protein (NP_689608)
Species:	Human
Expression Host:	HEK293
Expression cDNA Clone or AA Sequence:	RC206896
Predicted MW:	21.3 kDa
Protein Sequence:	>RC206896 protein sequence Red=Cloning site Green=Tags(s) MAGARRLELGEALALGSGWRHVCHALLYAPDPGMLFGRIPLRYAILMQMRFDGRLGFPGGFVDTQDRSLE DGLNRELREELGEAAAAFRVERTDYRSSHVGSGPRVVAHFYAKRLTLEELLAVEAGATRAKDHGLEVLGL VRVPLYTLRDGVGGLPTFLENSFIGSAREQLLEALQDLGLLQSGSISGLKIPAHH SGPTRTRPLEQKLISEEDLAANDILDYKDDDDKV
Tag:	C-Myc/DDK
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Labeling Method:	Labeled with [U- 13C6, 15N4]-L-Arginine and [U- 13C6, 15N2]-L-Lysine
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3
Storage:	Store at -80°C. Avoid repeated freeze-thaw cycles.
Stability:	Stable for 3 months from receipt of products under proper storage and handling conditions.
RefSeq:	NP_689608
RefSeq Size:	6117
RefSeq ORF:	588
Locus ID:	131870
UniProt ID:	Q96DE0
Cytogenetics:	3q22.1

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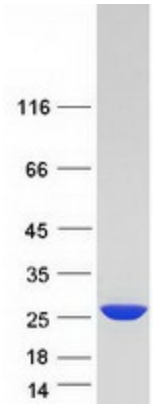
Summary: RNA-binding and decapping enzyme that catalyzes the cleavage of the cap structure of snoRNAs and mRNAs in a metal-dependent manner. Part of the U8 snoRNP complex that is required for the accumulation of mature 5.8S and 28S rRNA. Has diphosphatase activity and removes m7G and/or m227G caps from U8 snoRNA and leaves a 5'monophosphate on the RNA. Catalyzes also the cleavage of the cap structure on mRNAs. Does not hydrolyze cap analog structures like 7-methylguanosine nucleoside triphosphate (m7GpppG). Also hydrolysis m7G- and m227G U3-capped RNAs but with less efficiencies. Has broad substrate specificity with manganese or cobalt as cofactor and can act on various RNA species. Binds to the U8 snoRNA; metal is not required for RNA-binding. May play a role in the regulation of snoRNAs and mRNAs degradation. Acts also as a phosphatase; hydrolyzes the non-canonical purine nucleotides inosine diphosphate (IDP) and deoxyinosine diphosphate (dITP) as well as guanosine diphosphate (GDP), deoxyguanosine diphosphate (dGDP), xanthine diphosphate (XDP), inosine triphosphate (ITP) and deoxyinosine triphosphate (ITP) to their respective monophosphate derivatives and does not distinguish between the deoxy- and ribose forms (PubMed:20385596, PubMed:26121039). The order of activity with different substrates is IDP > dIDP >> GDP = dGDP > XDP = ITP = dITP (PubMed:20385596). Binds strongly to GTP, ITP and XTP. Participates in the hydrolysis of dIDP/IDP and probably excludes non-canonical purines from RNA and DNA precursor pools, thus preventing their incorporation into RNA and DNA and avoiding chromosomal lesions (PubMed:20385596).[UniProtKB/Swiss-Prot Function]

Product images:



Coomassie blue staining of purified NUDT16 protein (Cat# [TP306896]). The protein was produced from HEK293T cells transfected with NUDT16 cDNA clone (Cat# [RC206896]) using MegaTran 2.0 (Cat# [TT210002]).

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