Data Sheet (Cat.No.TMPY-01229)

TargetMol

SETD7 Protein, Human, Recombinant (His)

General Information

Synonyms:	SET7/9;SET domain containing (lysine methyltransferase) 7;SET7;SET9;KMT7
Protein Construction:	A DNA sequence encoding the human SETD7 (NP_085151.1) (Asp 2-Lys 366) was expressed, with a polyhistidine tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	Q8WTS6
Molecular Weight:	41.5 kDa (predicted); 48 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:	> 94 % 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 PBS, pH 7.4. 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

Histone-lysine N-methyltransferase SETD7, also known as SET domain containing (lysine methyltransferase) 7, SET7/9, Histone H3-K4 methyltransferase SETD7, H3-K4-HMTase SETD7, and SETD7, is a member of the histone-lysine methyltransferase family and SET7 subfamily. SETD7 is widely expressed and expressed in pancreatic islets. SETD7 contains three MORN repeats and one SET domain. SETD7 plays a central role in the transcriptional activation of genes such as collagenase or insulin. As a protein lysine methyltransferase (PKMT), SETD7 also has

methyltransferase activity toward non-histone proteins such as p53/TP53, TAF1, and possibly TAF7 by recognizing and binding in substrate proteins. The mono-methyltransferase activity of SETD7 is achieved by disrupting the formation at near-attack conformations for the dimethylation reaction. SETD7 is also a novel coactivator of NF-kappaB and plays a role in inflammation and diabetes.

Reference

Wang, H. et al., 2002, Mol Cell 8 (6): 1207-17.
Jacobs, SA. et al., 2002, Nat. Struct. Biol. 9 (11): 833-8.
Xiao B, et al., 2003, Nature. 421 (6923): 652-6.
Martens, JH. et al., 2003, Mol. Cell. Biol. 23: 1808-1816.Couture, JF. et al., 2006, Nat Struct Mol Biol 13 (2): 140-6.

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