Data Sheet (Cat.No.TMPY-03390)

TargetMol

LSM1 Protein, Human, Recombinant (His)

General Information

Synonyms:	LSM1 homolog, mRNA degradation associated;CASM;YJL124C;LSM1
Protein Construction:	A DNA sequence encoding the mature form of human LSM1 (O15116) (Met1-Tyr133) was expressed with a polyhistide tag at the N-terminus. Predicted N terminal: His
Species:	Human
Expression Host:	E. coli
Accession:	O15116
Molecular Weight:	17 kDa (predicted); 19-21 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:	> 85 % 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 10% glycerol, 20 mM Tris, 100 mM NaCl, pH 7.5. 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

LSM1 is an Sm-like protein. Sm-like proteins can be detected in a variety of organisms based on sequence homology with the Sm protein family. Sm-like proteins include the Sm sequence motif, which consists of two regions separated by a linker of variable length that folds as a loop. The Sm-like proteins are thought to form a stable heteromer present in tri-snRNP particles, which are important for pre-mRNA splicing. LSM1 has a role in replication-dependent histone mRNA degradation and binds specifically to the 3''-terminal U-tract of U6 snRNA.

LSM1 also facilitates RNA protein interactions and structural modifications which are required during ribosomal subunit assembly.

Reference

Shimizu Y,et al.(1997) Lineage- and differentiation stage-specific expression of LSM-1 (LPAP), a possible substrate for CD45, in human hematopoietic cells. Am J Hematol. 54(1):1=11.Graber MW,et al.(1997) CaSm: an Sm-like protein that contributes to the transformed state in cancer cells. Cancer Res. 57(14):2961-5.
Séraphin B,et al.(1999) Sm and Sm-like proteins assemble in two related complexes of deep evolutionary origin. EMBO J. 18(12):3451-62.

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