Data Sheet (Cat.No.TMPY-03344)

TargetMol

LSM3 Protein, Human, Recombinant (His)

General Information

Synonyms:	SMX4;YLR438C;USS2;LSM3 homolog, U6 small nuclear RNA associated (S. cerevisiae)
Protein Construction:	A DNA sequence encoding the mature form of human LSM3 (NP_055278.1)(Met1-Gly102) was expressed with a polyhistide tag at the N-terminus. Predicted N terminal: His
Species:	Human
Expression Host:	E. coli
Accession:	P62310
Molecular Weight:	13.7 kDa (predicted); 14-18 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:	> 95 % 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, 10% glycerol, 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

LSM3 (LSM3 Homolog, U6 Small Nuclear RNA And MRNA Degradation Associated) is a Protein Coding gene. LSM3 is a member of the snRNP Sm proteins family. It plays role in pre-mRNA splicing as a component of the U4/U6-U5 tri-snRNP complex that is involved in spliceosome assembly, and as a component of the pre-catalytic spliceosome (spliceosome B complex). Sm-like proteins can be detected in a variety of organisms. They all have the Sm sequence motif, which consists of 2 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. Diseases associated with LSM3 include Spondylolysis.

Reference

Gerhard DS, et al. (2004) The Status, Quality, and Expansion of the NIH Full-Length cDNA Project: The Mammalian Gene Collection (MGC) . Genome Res. 14(10B):2121-7.

Bauch A, et al. (2004) A physical and functional map of the human TNF-alpha/NF-kappa B signal transduction pathway. Nat Cell Biol. 6(2):97-105.

Nogaj LA, et al. (2005) Cellular levels of glutamyl-tRNA reductase and glutamate-1-semialdehyde aminotransferase do not control chlorophyll synthesis in Chlamydomonas reinhardtii. Plant Physiol. 139(1):389-96.

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