Data Sheet (Cat.No.TMPY-03442)

TargetMol

MOB4A/MOB1B Protein, Human, Recombinant (GST)

General Information

Synonyms:	MOB kinase activator 1B;MOBKL1A;MATS2;MOB4A
Protein Construction:	A DNA sequence encoding the human MOBKL1A (Q7L9L4) (Met1-Arg216) was fused with the GST tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	Q7L9L4
Molecular Weight:	52.3 kDa (predicted); 43-48 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:	> 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 20 mM Tris, 150 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

MST1 and MST2 are the mammalian Ste2-related protein kinases most closely related to Drosophila Hippo, a major regulator of cell proliferation and survival during development. Overexpression of MST1 or MST2 in mammalian cells is proapoptotic. MST1 and MST2 activity increase during mitosis, especially in nocodazole-arrested mitotic cells, where these kinases exhibit an increase in both abundance and activation. MST1 and MST2 also can be activated nonphysiologically by okadaic acid or H2O2. The MOB1B and MOBKL1B polypeptides, homologs of the

Drosophila MATS polypeptide, are identified as preferred MST1/MST2 substrates in vitro and are phosphorylated in cells in an MST1/MST2-dependent manner in mitosis and response to okadaic acid or H2O2. MST1/MST2-catalyzed MOB1B/MOBKL1B phosphorylation alters the ability of MOB1B/MOBKL1B to bind and regulate downstream targets such as the NDR-family protein kinases. Thus, MOB1B/MOBKL1B phosphorylation in cells promotes MOB1B/MOBKL1B binding to the LATS1 kinase and enables H2O2-stimulated LATS1 activation loop phosphorylation. Most importantly, the replacement of endogenous MOB1B/MOBKL1B by a non-phosphorylatable mutant is sufficient to accelerate cell proliferation substantially by speeding progression through G1/S as well as mitotic exit.

Reference

Ota T,et al.(2004) Complete sequencing and characterization of 21,243 full-length human cDNAs. Nat Genet. 36(1): 40-5.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.

Devroe E,et al.(2004) Human Mob proteins regulate the NDR1 and NDR2 serine-threonine kinases. J Biol Chem. 279 (23):24444-51.

Praskova M,et al.(2008) MOB1B/MOBKL1B phosphorylation by MST1 and MST2 inhibits cell proliferation. Curr Biol. 18(5):311-21.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481