Data Sheet (Cat.No.TMPY-03534)

TargetMol

CDC37 Protein, Mouse, Recombinant (His & GST)

General Information

Synonyms:	cell division cycle 37;p50;p50Cdc37
Protein Construction:	A DNA sequence encoding the mouse CDC37 (Q61081) (Met1-Ala379) was expressed with the N-terminal polyhistidine-tagged GST tag at the N-terminus. Predicted N terminal: Met
Species:	Mouse
Expression Host:	Baculovirus Insect Cells
Accession:	Q61081
Molecular Weight:	72.4 kDa (predicted); 66 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:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM Tris, 500 mM Nacl, 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

CDC37 is a protein that is expressed in proliferative zones during embryonic development and in adult tissues, consistent with a positive role in proliferation and is required for cell division in budding yeast. CDC37 is thought to play an important role in the establishment of signaling pathways controlling cell proliferation through targeting intrinsically unstable oncoprotein kinases such as Cdk-4, Raf-1, and src to the molecular chaperone Hsp90. Decreased Hsp90 expression can reduce the levels of microtubule-associated protein tau, whose overexpression

may induce many diseases. CDC37 is considered as a co-chaperone that is classified as Hsp90's accessory proteins. It has been reported that suppression of Cdc37 destabilized tau, leading to its clearance, whereas cdc37 overexpression preserved tau.Cdc37 was found to co-localize with tau in neuronal cells and to physically interact with tau from human brain. Moreover, Cdc37 levels significantly increased with age.

Reference

Dai K, et al. (1996) P hysical Interaction of Mammalian CDC37 with CDK4. The journal of biological chemistry. 271: 22030-4.

Pearl LH, et al. (2005) Hsp90 and Cdc37-a chaperone cancer conspiracy. Current opinion in genetics development. 15 (1): 55-61.

Chen GQ, et al. (2002) TNF-Induced Recruitment and Activation of the IKK Complex Require Cdc37 and Hsp90. Molecular cell. 9 (2): 401-10.