Data Sheet (Cat.No.TMPY-02499)

TargetMol

Cofilin 2 Protein, Human, Recombinant (His)

General Information

Synonyms:	cofilin 2 (muscle);NEM7
Protein Construction:	A DNA sequence encoding the human CFL2 (Q9Y281-1) (Ala 2-Leu 166) was expressed, with a polyhistidine tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	Q9Y281-1
Molecular Weight:	20.4 kDa (predicted); 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:	> 98 % 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 7.5. 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

Cofilin 2 (muscle), also known as CFL2, is a member of cofilin family of the actin-binding protein superfamily. Cofilin2 shows significant homology to the other two members: cofilin 1 and DSTN, through its entire sequence, and contains residues conserved among the cofilin family that are responsible for actin-binding. Cofilin 2 (CFL2) is an important regulator of striated myocyte function. Purified cofilin 2 depolymerized actin filaments in a dose- and pH-dependent manner and reduced the apparent viscosity of an actin solution, although they did not co-sediment

with actin filaments at all. Cofilin2 is not expressed in vegetative cells, but is transiently induced during the aggregation stage of development, whereas cofilin 1 was predominantly expressed in vegetative cells.

Reference

Aizawa H, et al. (2001) Cofilin-2, a novel type of cofilin, is expressed specifically at aggregation stage of Dictyostelium discoideum development. Genes Cells. 6 (10): 913-21.

Papalouka V, et al. (2009) Muscle LIM protein interacts with cofilin 2 and regulates F-actin dynamics in cardiac and skeletal muscle. Papalouka V, Mol Cell Biol. 29 (22): 6046-58.

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