Data Sheet (Cat.No.TMPY-03990)

TargetMol

Profilin 4 Protein, Human, Recombinant (His)

General Information

Synonyms:	profilin family, member 4
Protein Construction:	A DNA sequence encoding the human PFN4 (NP_955378.1) (Met1-Ser129) was expressed with a polyhistide tag at the N-terminus. Predicted N terminal: His
Species:	Human
Expression Host:	E. coli
Accession:	Q8NHR9
Molecular Weight:	16.2 kDa (predicted); 14 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, 200 mM Arg, 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

PFN4, also known as profilin 4, is a member of the profilin family. Profilin can be detected in all eukaryotic organisms. It plays an important role in the spatially and temporally controlled growth of actin microfilaments. Profilin is one of the most abundant actin monomer binders, but proteins such as CAP and (in mammals) thymosin β4 have some functional overlaps with profilin. In contrast, ADF/cofilin has some properties that antagonize profilin action. PFN4 also functions in the dynamic turnover and restructuring of the actin cytoskeleton.

Reference

Di Nardo A. et al., 2000, J Cell Sci. 113 (21): 3795-803.
Witke W. et al., 1998, EMBO J. 17 (4): 967-76.
Carlsson L. et al., 1977, J Mol Biol. 115 (3): 465-83.

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