Data Sheet (Cat.No.TMPY-03385)

TargetMol

FKBP14 Protein, Human, Recombinant (His)

General Information

Synonyms:	IPBP12;EDSKMH;FK506 binding protein 14, 22 kDa;FKBP22
Protein Construction:	A DNA sequence encoding the human FKBP14 (Q9NWM8) (Met1-Lys207) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Ala 20
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q9NWM8
Molecular Weight:	22.9 kDa (predicted); 25 and 27 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:	< 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 PBS, 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

FKBP14 belongs to the FK506-binding protein family. It contains 2 EF-hand domains and one PPIase FKBP-type domain. FKBP14 can be detected in the lumen of the endoplasmic reticulum where it is thought to accelerate the folding of proteins during protein synthesis. Truncation of the amino-terminus of FKBP14 significantly decreases peptidyl prolyl cis-trans isomerase activity, therefore implicating that the PPIase FKBP-type domain must be located at the N-terminus. Defects in FKBP14 can cause Ehlers-Danlos syndrome with progressive kyphoscoliosis,

myopathy, and hearing loss. A syndrome with features of Ehlers-Danlos syndrome types VIA and VIB on the one hand, and the collagen VI-related congenital myopathies Ullrich congenital muscular dystrophy and Bethlem myopathy on the other hand.

Reference

Baker K, et al. (2003) The secreted protein discovery initiative (SPDI), a large-scale effort to identify novel human secreted and transmembrane proteins: a bioinformatics assessment. Genome Res. 13:2265-70.

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

The MGC Project Team. (2004) The status, quality, and expansion of the NIH full-length cDNA project: the Mammalian Gene Collection (MGC). Genome Res. 14:2121-7.