Data Sheet (Cat.No.TMPY-00777)

TargetMol

DPP2 Protein, Human, Recombinant (His)

General Information

Synonyms:	DPP2;DPPII;QPP;dipeptidyl-peptidase 7
Protein Construction:	A DNA sequence encoding the human DPPII (NP_037511.2) (Met 1-Leu 492) with a C-terminal polyhistidine tag was expressed. Predicted N terminal: Gly 22
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q9UHL4
Molecular Weight:	53.6 kDa (predicted); 60 kDa (reducing condition, due to glycosylation)

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:	≥ 90 % 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

DPP7 (dipeptidylpeptidase 7), also known as DPPII and DPP2, is a post-proline cleaving aminopeptidase expressed in quiescent lymphocytes. Dipeptidyl peptidases (DPPs) have post-proline dipeptidyl aminopeptidase activity, cleaving Xaa-Pro dipeptides from the N-termini of proteins. DPPs mediate regulatory activity of their substrates and have been linked to a variety of diseases including type 2 diabetes, obesity and cancer. DPPs can bind specific voltage-gated potassium channels and alter their expression and biophysical properties and may also influence T

cells. DPP proteins include DPRP1, DPRP2, DPP3, DPP7, DPP10, DPPX and CD26. It localizes to lysosomes. DPP7 localizes to lysosomes and exists as a homodimer via its leucine zipper motif and is involved in the degradation of oligopeptides. In response to calcium release, it can be secreted in its active form. It is essential for lymphocyte survival, as the inhibition of DPP7 results in quiescent cell apoptosis.

Reference

Chiravuri M, et al. (1999) A novel apoptotic pathway in quiescent lymphocytes identified by inhibition of a post-proline cleaving aminodipeptidase: a candidate target protease, quiescent cell proline dipeptidase. J Immunol. 163(6):3092-9.

Fukasawa KM, et al. (2001) Cloning and functional expression of rat kidney dipeptidyl peptidase II. Biochem J. 353 (Pt 2):283-90.

Fornas E, et al. (1992) Effect of cholesterol and its autooxidation derivatives on endocytosis and dipeptidyl peptidases of aortic endothelial cells. Histol Histopathol. 7(2):163-8.