

## DPEP1 Protein, Human, Recombinant (His)

### General Information

Synonyms:	MBD1;dipeptidase 1;MDP;RDP
Protein Construction:	A DNA sequence encoding the human DPEP1 (P16444) (Met1-Ser385) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Asp 17
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P16444
Molecular Weight:	42.5 kDa (predicted); 44-47 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

Dehydropeptidase-I, also known as DPEP1, is a kidney membrane enzyme. Its expression in normal colonic mucosa is very low, but it is highly expressed in colorectal adenoma and cancer specimens and is negatively correlated with parameters of pathological aggressiveness and poor prognosis. The overexpression of DPEP1 suppressed tumor cells invasiveness and increased sensitivity to chemotherapeutic agent Gemcitabine. Growth factor EGF treatment decreased DPEP1 expression. Dehydropeptidase-I may be a candidate target in PDAC for

designing improved treatments. It uses zinc as a cofactor and acts as a disulfide-linked homodimer.

Reference

Toiyama Y. et al., 2011, J Gastroenterol. 46 (2): 153-63.

Zhang G. et al., 2012, PLoS One. 7 (2): e31507.

Okamoto T. et al., 2011, Mod Pathol. 24 (2): 267-76.

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