Data Sheet (Cat.No.TMPY-00080)

TargetMol

IGFBP-1 Protein, Canine, Recombinant (His)

General Information

Synonyms:	insulin-like growth factor binding protein 1
Protein Construction:	A DNA sequence encoding the canine IGFBP1 (XP_005629556.1) (Met1-Ser249) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Thr 26
Species:	Canine
Expression Host:	HEK293 Cells
Accession:	A0A8C0MZD6
Molecular Weight:	26 kDa (predicted)

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

IGFBP1, also known as IGFBP-1 and insulin-like growth factor-binding protein 1, is a member of the insulin-like growth factor-binding protein family. IGF binding proteins (IGFBPs) are proteins of 24 to 45 kDa. All six IGFBPs share 50% homology and have binding affinities for IGF-I and IGF-II at the same order of magnitude as the ligands have for the IGF-IR. IGF-binding proteins prolong the half-life of the IGFs and have been shown to either inhibit or stimulate the growth-promoting effects of the IGFs on cell culture. They alter the interaction of IGFs with their cell

surface receptors. IGFBP1 has an IGFBP domain and a thyroglobulin type-I domain. It binds both insulin-like growth factors (IGFs) I and II and circulates in the plasma. The binding of this protein prolongs the half-life of the IGFs and alters their interaction with cell surface receptors.

Reference

Wood AW,et al. (2005) Insulin-like growth factor signaling in fish. Int Rev Cytol. 243:215-85.
Firth SM,et al. (2003) Cellular actions of the insulin-like growth factor binding proteins. Endocr Rev. 23 (6):824-54.
Ferry RJ,et al. (1999) Insulin-like growth factor binding proteins: new proteins, new functions. Horm Res. 51(2):53-67.

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