Data Sheet (Cat.No.TMPK-01097)

TargetMol

AFP Protein, Canine, Recombinant (His)

General Information

Synonyms:	Alpha-fetoprotein;HPAFP;Alpha-1-fetoprotein;α-1-fetoprotein;Alpha-feto;FETA;AFPD;α-fetoprotein;α-feto;AFP
Protein Construction:	Arg19-Val609
Species:	Canine
Expression Host:	HEK293 Cells
Accession:	Q8MJU5
Molecular Weight:	67.71 kDa (predicted). Due to glycosylation, the protein migrates to 68-70 kDa based on Tris-Bis PAGE result.

QC Testing

Biological Activity:	Activity has not been tested. 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 Tris-Bis PAGE; > 95% as determined by HPLC
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, 8% trehalose is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

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

Alpha-fetoprotein is a shuttle protein that delivers nutrients through receptor-mediated endocytosis to embryotic cells. In adults, alpha-fetoprotein can shuttle drugs into alpha-fetoprotein receptor-positive myeloid-derived suppressor, regenerating and also cancer cells. Drugs with high-binding affinity to alpha-fetoprotein can activate or deplete targeted cells. Myeloid-derived suppressor cells activation leads to immune suppression that can be

used for treating autoimmune diseases.

Reference

Pak VN. The use of alpha-fetoprotein for the treatment of autoimmune diseases and cancer. Ther Deliv. 2018 Jan;9 (1):37-46. doi: 10.4155/tde-2017-0073. PMID: 29216804.