Data Sheet (Cat.No.TMPH-00026)

TargetMol

Catechol 1,2-dioxygenase Protein, Acinetobacter baylyi, Recombinant (His)

General Information

Synonyms: DELTA-AITX-Aeq1a;Equinatoxin II (EqT II;EqTII);DELTA-actitoxin-Aeq1a;Equinatoxin-2

Protein Construction: 36-214 aa

Species: Actinia equina

Expression Host: E. coli

Accession: P61914

Molecular Weight: 23.9 kDa (predicted)

AA Sequence: SADVAGAVIDGASLSFDILKTVLEALGNVKRKIAVGVDNESGKTWTALNTYFRSGTSDIVLPHKVPHGKALLYN GQKDRGPVATGAVGVLAYLMSDGNTLAVLFSVPYDYNWYSNWWNVRIYKGKRRADQRMYEELYYNLSPFR GDNGWHTRNLGYGLKSRGFMNSSGHAILEIHVSKA

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: > 85% as determined by SDS-PAGE.

Endotoxin: < 1.0 EU/μg of the protein as determined by the LAL method.

Formulation: Tris-based buffer, 50% glycerol

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:

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

Pore-forming protein that forms cations-selective hydrophilic pores of around 1 nm and causes cardiac stimulation and hemolysis. Pore formation is a multi-step process that involves specific recognition of membrane sphingomyelin (but neither cholesterol nor phosphatidylcholine) using aromatic rich region and adjacent phosphocholine (POC) binding site, firm binding to the membrane (mainly driven by hydrophobic interactions) accompanied by the transfer of the N-terminal region to the lipid-water interface and finally pore formation after

oligomerization of monomers. Cytolytic effects include red blood cells hemolysis, platelet aggregation and lysis, cytotoxic and cytostatic effects on fibroblasts. Lethality in mammals has been ascribed to severe vasospasm of coronary vessels, cardiac arrhythmia, and inotropic effects.

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