Data Sheet (Cat.No.TMPJ-00100)

TargetMol

Artemin Protein, Human, Recombinant

General Information

Synonyms: ARTN;Artemin;EVN;Enovin;Neublastin

Protein Construction: Ala108-Gly220

Species: Human

Expression Host: E. coli

Accession: Q5T4W7

Molecular Weight: 14 KDa (reducing condition)

AA Sequence: Ala108-Gly220

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: Greater than 95% as determined by reducing SDS-PAGE. Greater than 95% as determined by SEC-HPLC.

Endotoxin: < 0.1 ng/μg (1 EU/μg) as determined by LAL test.

Formulation: Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM HEPES, 150 mM NaCl, pH 7.4.

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:

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

Human Artemin is a GDNF family ligand that is distantly related to the TGF-β superfamily of molecules. It is synthesized as a preproprotein, and contains a variable length pre-, or signal sequence, plus a 68 amino acid (aa) proregion and a 113 aa mature segment. Following synthesis and proteolytic processing, mature ARTN is secreted as a presumably glycosylated, 28 kDa disulfide-linked homodimer that contains three intrachain disulfide bonds

and the typical TGF-β signature cysteine-knot motif. In the mature region, human ARTN is 89% and 88% aa identical to rat and mouse ARTN, respectively. Human ARTN is active on rodent cells. The receptor for ARTN has been identified as the ligand binding subunit GFRα-3 plus the signal transducing subunit, RET. The GFRα-1/RET receptor complex has also been suggested to be a ligand binding unit for ARTN. ARTN is known to be a chemoattractant for sympathetic neuron axons innervating the developing cardiovascular system. It also promotes sensory neuron survival and likely plays a role in the development of the peripheral nervous system. Finally, it has been reported to reverse neuropathic pain due to nerve injury, and to help resolve morphological changes associated with nerve damage.

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