

## Recombinant Human Artemin Protein

**Catalog Number:** PKSH033760

**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

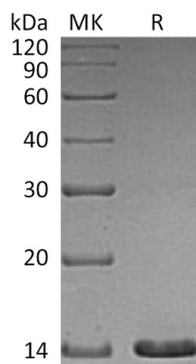
### Description

<b>Species</b>	Human
<b>Source</b>	E.coli-derived Human Artemin protein Ala108-Gly220
<b>Calculated MW</b>	12.1 kDa
<b>Observed MW</b>	14 kDa
<b>Accession</b>	Q5T4W7
<b>Bio-activity</b>	Not validated for activity

### Properties

<b>Purity</b>	> 95 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per µg of the protein as determined by the LAL method.
<b>Storage</b>	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 °C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution of 20mM HEPES, 150mM NaCl, pH 7.4. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
<b>Reconstitution</b>	Please refer to the specific buffer information in the printed manual.

### Data



> 95 % as determined by reducing SDS-PAGE.

### Background

Human Artemin is a GDNF family ligand that is distantly related to the TGF- $\beta$  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- $\beta$  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 GFR $\alpha$ -3 plus the signal transducing subunit, RET. The GFR $\alpha$ -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.