

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Mouse                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects mouse Artemin in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant mouse (rm) AgRP, rmCripto, recombinant human (rh) Cripto-1, recombinant drosophila Dpp, recombinant rat GDNF, rhLAP, rhLatent T                            |
| <b>Source</b>             | Monoclonal Rat IgG <sub>2A</sub> Clone # 185234                                                                                                                                                                                                                             |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant                                                                                                                                                                                                                  |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant mouse Artemin<br>Ala112-Gly224<br>Accession # Q9Z0L2.1                                                                                                                                                                                  |
| <b>Conjugate</b>          | Alexa Fluor 647<br>Excitation Wavelength: 650 nm<br>Emission Wavelength: 668 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the [Technical Information](#) section on our website.

|                             |                                                                        |
|-----------------------------|------------------------------------------------------------------------|
| <b>Western Blot</b>         | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunohistochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

## PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

## BACKGROUND

Artemin is a member of the Glia Cell-Derived Neurotrophic factor (GDNF) family ligands, which include GDNF, Persephin, Artemin, and Neurturin. GDNF family ligands are distant members of the Transforming Growth Factor  $\beta$  (TGF- $\beta$ ) superfamily (1-4). Similar to other TGF- $\beta$  family proteins, Artemin is synthesized as a large precursor protein that is cleaved at the dibasic cleavage site (RXRR) to release the carboxy-terminal domain. The carboxy-terminal domain of Artemin contains the characteristic seven conserved cysteine residues necessary for the formation of the cysteine-knot and the single interchain disulfide bond. Biologically active Artemin is a disulfide-linked homodimer of the carboxy-terminal 113 amino acid residues. Mature mouse Artemin shares 88.5% amino acid sequence similarity with human Artemin. Mature Artemin also shares approximately 40% amino acid sequence identity with the other three members of the GDNF family ligands (5). Bioactivities of all GDNF family ligands are mediated through a receptor complex composed of a high affinity ligand binding component (GFR $\alpha$ 1-GFR $\alpha$ 4) and a common signaling component, cRET (receptor tyrosine kinase) (5-8). Artemin prefers to bind to GFR $\alpha$ 3 and activates the GFR $\alpha$ 3-RET. However, in the presence of RET, it can bind to GFR $\alpha$ 1 as well (4, 5, 9). Artemin has been shown to promote the survival and growth of various peripheral and central neurons, including sympathetic and dopaminergic neurons. It may also play an important role in the development of sympathetic neurons and several organs (5, 10, 11).

## PRODUCT SPECIFIC NOTICES

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