Human Artemin Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF2589

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Artemin in direct ELISAs and Western blots. In direct ELISAs, approximately 50% cross-reactivity with recombinant mouse Artemin is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human Artemin Ala108-Gly220 Accession # Q5T4W7
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

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.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Human Artemin (Catalog # 2589-AR)
Immunohistochemistry	5-15 µg/mL	Immersion fixed paraffin-embedded sections of human spinal cord subjected to Antigen Retrieval Reagent-Basic (Catalog # CTS013)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Human Artemin (ARTN; also known as enovin and neublastin) is a GDNF family ligand that is distantly related to the TGF-β superfamily of molecules (1-4). As such, 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 (5-7). Alternate splicing and start sites create signal sequences of 22, 30 and 39 aa, respectively. Their significance is unknown. 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 (5, 7). In the mature region, human ARTN is 89% and 88% aa identical to rat (8) and mouse ARTN (5, 7), respectively. Cells known to express ARTN include Schwann cells (2) and embryonic vascular smooth muscle cells (9). Human ARTN is active on rodent cells (5). The receptor for ARTN has been identified as the ligand binding subunit GFRα-3 plus the signal transducing subunit, RET (1, 5). The GFRα-1/RET receptor complex has also been suggested to be a ligand binding unit for ARTN (2, 5). Evidence, however, suggests that the GFRα-1/RET complex plays no functional role in ARTN activity (10, 11). ARTN is known to be a chemoattractant for sympathetic neuron axons innervating the developing cardiovascular system (9). It also promotes sensory neuron survival and likely plays a role in the development of the peripheral nervous system (5). Finally, it has been reported to reverse neuropathic pain due to nerve injury, and to help resolve morphological changes associated with nerve damage (12).

References:

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