Human Artemin Antibody

Monoclonal Mouse IgG_{2B} Clone # 314908

Catalog Number: MAB2589

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Artemin in direct ELISAs and Western blots. In Western blots, no cross-reactivity with recombinant human (rh) BIG-H3, rhCripto-1, recombinant mouse (rm) Cripto-1, recombinant Drosophila DPP, rhDPP-6, rhGDNF, rhLAP, rhLatent TGF-β1, rhTGF-β1.2, rhTGF-β3, rhLefty, rmLefty-1, rhMIS, rhNeurturin, rmNODAL, rhPersephin, recombinant amphibian TGF-β5, rhTGF-α or rhTGF-β2 is observed.
Source	Monoclonal Mouse IgG_{2B} Clone # 314908
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human Artemin Ala108-Gly220 Accession # Q5T4W7.1
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 either lyophilized or 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	1 µg/mL	Recombinant Human Artemin (Catalog # 2589-AR) under non-reducing conditions only

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 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. 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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