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Lacosamide

National Cancer Institute

Source

National Cancer Institute. *Lacosamide*. NCI Thesaurus. Code C83859.

A functionalized amino acid compound specifically synthesized as an anticonvulsive drug to use as add-on therapy for partial-onset seizures with antinociceptive and neuroprotective activities. Lacosamide selectively enhances slow inactivation of voltage-gated sodium channels without affecting fast inactivation, thereby stabilizing hyperexcitable neuronal membranes. Furthermore, this agent binds to collapsin response mediator protein 2 (CRMP2; DPYSL2), a cytosolic phosphoprotein expressed in most tissues. In the nervous system, CRMP2 acts as a mediator of growth cone collapse as well as modifies axon number, length, and neuronal polarity.