

LSAMP

Official Full Name limbic system-associated membrane protein provided by HGNC

Also known as: [LAMP](#); IGLON3

This gene encodes a member of the immunoglobulin LAMP, OBCAM and neurotrimin (IgLON) family of proteins. The encoded preproprotein is proteolytically processed to generate a neuronal surface glycoprotein. This protein may act as a selective homophilic adhesion molecule during axon guidance and neuronal growth in the developing limbic system. The encoded protein may also function as a tumor suppressor and may play a role in neuropsychiatric disorders. Alternative splicing results in multiple transcript variants, at least one of which encodes a preproprotein that is proteolytically processed. [provided by RefSeq, Jan 2016].

The IgLON family members [Neurotrimin](#) (NTM) and Limbic System-Associated Membrane Protein ([LSAMP](#)) were identified as ADAM10 substrates that are shed from the cell surface of [Dorsal root ganglion](#) (DRG) neurons. Overexpression of LSAMP and NTM suppresses outgrowth from DRG neurons. Furthermore, LSAMP loss of function decreases the outgrowth sensitivity to an ADAM10 inhibitor. Together this findings support a role for ADAM-dependent shedding of cell surface LSAMP in promoting outgrowth from DRG neurons ¹⁾.

¹⁾

Sanz RL, Ferraro GB, Girouard MP, Fournier AE. Ectodomain shedding of Limbic System-Associated Membrane Protein (LSAMP) by ADAM Metallopeptidases promotes neurite outgrowth in DRG neurons. Sci Rep. 2017 Aug 11;7(1):7961. doi: 10.1038/s41598-017-08315-0. PubMed PMID: 28801670.

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