

ABSTRACT

Thesis: Identification of Vesicle-Associated Membrane Protein 7 (VAMP-7) in Rabbit B Lymphocytes

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Abstract:

VAMP-7 has been found to interact with SNAP-23, a t-SNARE that functions in relocating granule membranes in response to stimulation, and plays a large role in the regulation of granule release from mast cells in response to an allergic reaction. While evidence suggests that VAMP-7 is active in antibody release in the innate immune system, little investigation has been completed on VAMP-7 interaction in specific antibody release of B lymphocytes of the humoral immune system. Little research has previously focused on vesicular transport within B lymphocytes, leaving molecular mechanisms within B lymphocytes a mystery. Immunodot blots, western blots, and immunofluorescent microscopy were all utilized with the goal of identifying the presence of VAMP-7. Immunoblot blots for both 55D1 and 240E cells were all negative for the presence of VAMP-7. However, VAMP-7 was detected using immunofluorescent microscopy in both 55D1 and 240E cell lines.