

# RNA interference of Marlin-1/Jakmip1 results in abnormal morphogenesis and migration of cortical pyramidal neurons

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The formation of the nervous systems requires processes that coordinate proliferation, differentiation and migration of neuronal cells, which extend axons, generate dendritic branching and establish synaptic connections during development. The structural organization and dynamic remodeling of the cytoskeleton and its association to the secretory pathway are critical determinants of cell morphogenesis and migration. Marlin-1 (Jakmip1) is a microtubule-associated protein predominantly expressed in neurons and lymphoid cells. Marlin-1 participates in polarized secretion in lymphocytes, but its functional association with the neuronal cytoskeleton and its contribution to brain development have not been explored. Combining in vitro and in vivo approaches we show that Marlin-1 contributes to the establishment of neuronal morphology. Marlin-1 associates to the cytoskeleton in neurites, is required for the maintenance of an intact Golgi apparatus and its depletion produces the down-regulation