

# Directed migration of lymphocytes by integrins

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Upon recruitment from blood to inflamed zones, leukocytes cross blood vessels endothelium at transmigration portals enriched in integrins ligands[1] and then migrate in inflamed tissues with an arguable integrin-dependent manner[2,3]. These observations suggest that integrins play a direct or indirect role in leukocyte guided migration in vivo. In vitro, crawling lymphocytes orient either with or against a flow on substrates coated by ligands of integrins[4-6]. In absence of flow, their orientation is further biased towards increasing or decreasing gradients of integrins ligands density[7]. These rheo- and haptotaxis phenotypes reveal original and robust capacities of integrins to direct leukocytes migration with mechanisms involving integrins spatio-temporal activation and cross-talk.

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