

ABSTRACT

NG2 proteoglycan is a novel membrane – spanning proteoglycan, expressed in general in developing tissue whose cells are characteristic for its increased level of proliferation and motility. NG2 proteoglycan is considered to be an anchor for cell adhesion capabilities on different substrata as well as a signaling transmembrane structure which is capable of affecting actin cytoskeleton and causing increased cell migration. This bibliographic search shows the considered effect of NG2 proteoglycan to the migration abilities of cancer cells via different molecular mechanisms, such as NG2 – mediated, integrin – independent cell interactions with collagens and other ECM substrata, effect of phosphorylation with two different kinases leading to diverse signaling and different behavior in response to phosphorylation and finally the interaction with scaffolding protein MUPP1 and possible connection with signaling pathway to RhoA GTPase, which is involved in cytoskeleton regulation.