

P036 Exploring the interaction of integrin $\alpha 1\beta 1$ with phospholipase $C\gamma 1$
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Phospholipases (PL) are intracellular enzymes that catalyze the hydrolysis of the plasma membrane component PtdIns(4,5)P₂ to generate the second messengers DAG and Ins(3,4,5)P₃. Phospholipase $C\gamma 1$ was originally found to be activated upon engagement of receptor tyrosine kinases. Tyrosine phosphorylation is essential for $PLC\gamma 1$ activity; besides membrane targeting and activation by lipids are also required.

Next to its function in growth factor-controlled signal transduction, $PLC\gamma 1$ is also tyrosine phosphorylated and activated upon integrin engagement and localizes to focal adhesions.

Previously, in co-immunoprecipitation and peptide-binding studies we identified $PLC\gamma 1$ as binding partner of $\alpha 1\beta 1$ Integrin.

Present data point at the N-terminal PH-domain and the C-terminal SH2-domain of $PLC\gamma 1$ as binding-relevant partner modules. To further characterize this protein-protein interaction, GST fusion proteins consisting of different domains of $PLC\gamma 1$ were recombinantly expressed to be applied in NMR studies.

Furthermore, transient transfection studies of $PLC\gamma 1$ PH domain demonstrate its impact on $\alpha 1\beta 1$ Integrin-mediated cell shape and migration.