SHP1 binds p-CD22

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Introduction

Reactome is open-source, open access, manually curated and peer-reviewed pathway database. Pathway annotations are authored by expert biologists, in collaboration with Reactome editorial staff and cross-referenced to many bioinformatics databases. A system of evidence tracking ensures that all assertions are backed up by the primary literature. Reactome is used by clinicians, geneticists, genomics researchers, and molecular biologists to interpret the results of high-throughput experimental studies, by bioinformaticians seeking to develop novel algorithms for mining knowledge from genomic studies, and by systems biologists building predictive models of normal and disease variant pathways.

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Literature references

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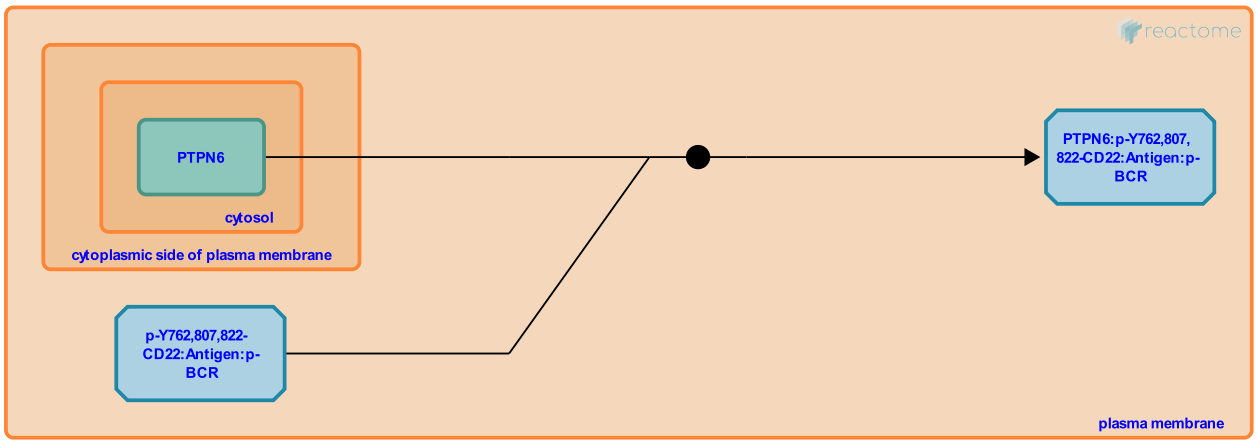
Stable identifier: R-HSA-5690701

Type: binding

Compartments: plasma membrane, cytosol



The phosphorylated ITIMs of CD22 facilitates recruitment of the tyrosine phosphatase SHP1 (Src homology region 2 domain-containing phosphatase-1 also referred as PTPN6/Tyrosine-protein phosphatase non-receptor type 6), which down modulates BCR signalling (Doody et al. 1995). Activation of SHP1 regulates the strength of the BCR-induced Ca+2 signal. Regulation of Ca+2 signalling occurs both by dephosphorylation of intracellular SHP1 substrates which are important for triggering of Ca+2 signals (Adachi et al. 2001, Stebbins et al. 2003), as well as by a SHP1 dependent activation of the Ca+2 plasma membrane pump PMCA4 which controls termination of the signal (Muller et al. 2013, Ghosh et al. 2006).

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Editions

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