CD22 binds B-cell receptor

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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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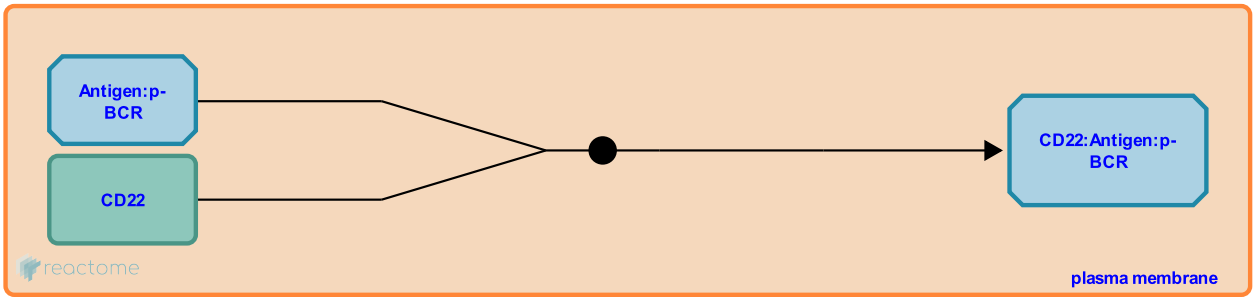
Stable identifier: R-HSA-5690740

Type: binding

Compartments: plasma membrane



Physical association of CD22 with the BCR seems to have direct involvement in the regulation of BCR signalling, as antibody-mediated clustering of CD22 with the BCR leads to dampened signaling (Smith et al. 1998), and evidence of their association has been obtained by confocal microscopy, coimmunoprecipitation and chemical crossing (Zhang et al. 2004, Phee et al. 2001, Peaker et al. 1993, Law et al. 1994, Leprince et al. 1993, Collins et al. 2006). Forced ligation of CD22 to the BCR dramatically increases CD22 phosphorylation and suppression of BCR signalling (Macauley, 2013). This is relevant to suppression of BCR signalling to membrane antigens on B cells that contain self sialic acids (Lanoue, 2002; Macauley 2013). CD22 ligand binding modulates its activity as a negative regulator of B cell signalling.

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Editions

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