I. Complex Hypernode CTNNB1 The destruction complex APC (APC/Axin1/GSK3) bound Axin1 GSK3 to β -catenin (CTNNB1) Directed hyperedge II. Regulated reaction CTNNB1 PP2A-B56a APC PP2A-B56a GSK3 Axin1 dephosphorylates the CTNNB1 APC/Axin1/GSK3/ APC **β-catenin complex** Axin1 GSK3 Directed hyperedge III. Complex assembly WNT3A WNT3A The WNT3A/FZD5/LRP6 (FZD5) (LRP6) FZD5 LRP6 complex sequesters GSK3 Axin1 GSK3 and Axin1, releasing APC and CTNNB1) active β-catenin APC CTNNB1 Axin1 GSK3 APC (b) WNT3A WNT3A (FZD5) LRP6) GSK3 Axin1 FZD5 LRP6 GSK3 Axin1 CTNNB1 PP2A-B56a APC CTNNB1 Axin1 GSK3 APC Protein PTM

Signaling hypergraph representation

(a)