



**Figure S1. Glycosylation pathways.**

**(A)** *N*-glycosylation pathway. The NSTP-1 protein transports UDP-GlcNAc from the cytoplasm to the lumen of the Golgi apparatus. SQV-3 creates galactose-β1,4-GlcNAc linkages and SVH-11 adds Fuc to protein-linked galactose-β1,4-GlcNAc.

**(B)** Glycosaminoglycation pathway. SQV-1 converts UDP-GlcA to UDP-Xyl in the lumen of the Golgi apparatus. SQV-6 transfers Xyl from UDP-Xyl to specific serine sites in proteins. SQV-3 transfers Gal from UDP-Gal to Xyl bound to serine, resulting in biosynthesis of chondroitin and heparan sulfate glycosaminoglycans. SQV-5 is required for the synthesis of the repeating disaccharide region of chondroitin.