Connexins (Cx) (TC# 1.A.24), or gap junction proteins, are structurally related transmembrane proteins that assemble to form vertebrate gap junctions. An entirely different family of proteins, the innexins, form gap junctions in invertebrates.

Each gap junction is composed of two hemichannels, or connexons, which consist of homo- or heterohexameric arrays of connexins, and the connexon in one plasma membrane docks end-to-end with a connexon in the membrane of a closely opposed cell. The hemichannel is made of six connexin subunits which are themselves each constructed out of six connexin molecules[clarification needed]. Gap junctions are essential for many physiological processes, such as the coordinated depolarization of cardiac muscle, proper embryonic development, and the conducted response in microvasculature. For this reason, mutations in connexin-encoding genes can lead to functional and developmental abnormalities.