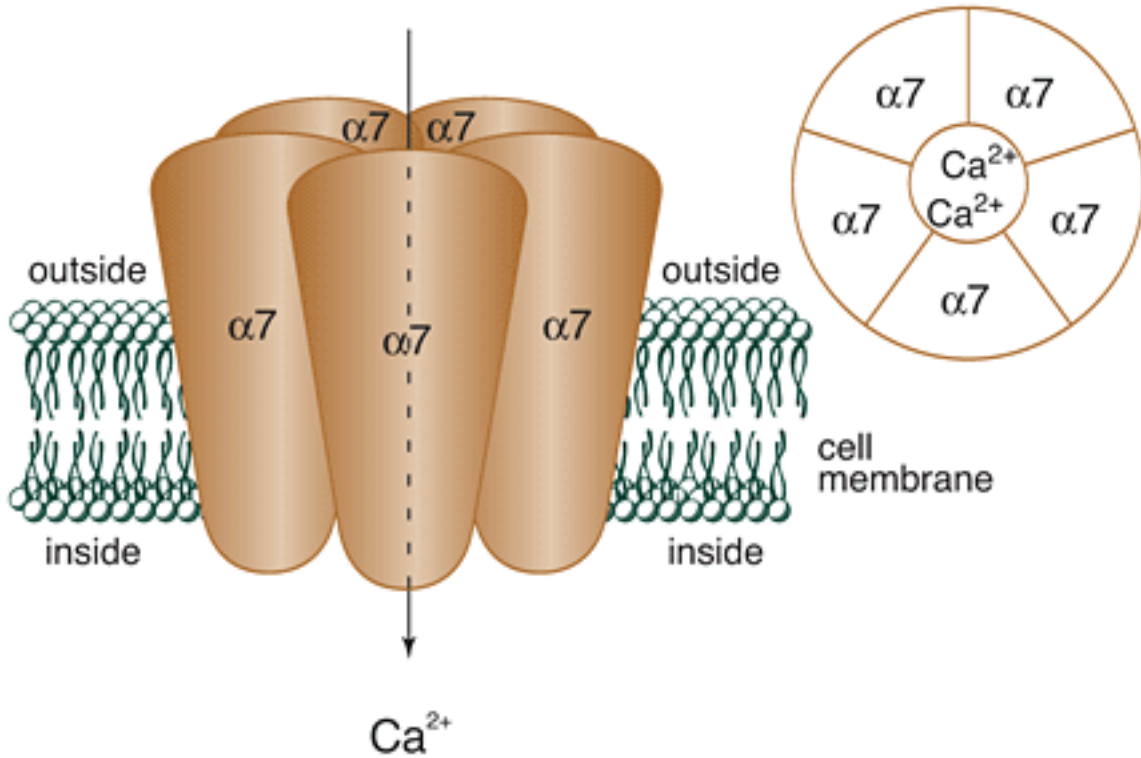
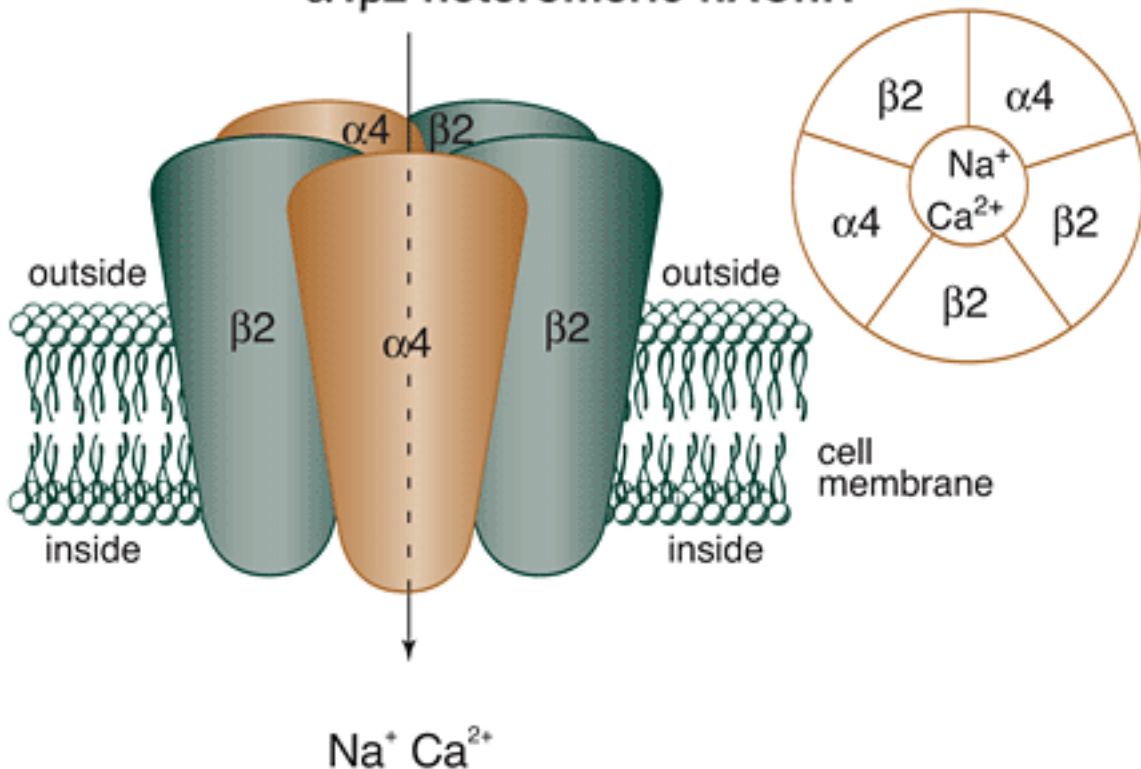


Schematic representation of the two most common subtypes of nAChRs

Five $\alpha 7$ subunits form an $\alpha 7$ homo-oligomeric nAChR



Two $\alpha 4$ and three $\beta 2$ subunits form an $\alpha 4\beta 2$ heteromeric nAChR



Both receptors consist of five subunits. The $\alpha 7$ nicotinic acetylcholine receptor (nAChR) consists of five $\alpha 7$ subunits and is called an $\alpha 7$ homo-oligomeric nAChR (top). The $\alpha 4\beta 2$ nAChR is composed of two $\alpha 4$ subunits and three $\beta 2$ subunits and thus is called an $\alpha 4\beta 2$ heteromeric nAChR (bottom). In both nAChRs, the subunits are arranged around a central pore or channel that opens when agents such as acetylcholine or nicotine bind to the nAChR, allowing positively charged ions to flow through the channel into the cell. The $\alpha 7$ nAChR principally allows passage of calcium (Ca^{2+}) ions, whereas the $\alpha 4\beta 2$ nAChR allows passage of both calcium and sodium (Na^+).