Notch proteins

Notch proteins are a family of Type-1 transmembrane proteins that form a core component of the Notch signaling pathway, which is highly conserved in metazoans. The Notch extracellular domain (NECD) mediates interactions with DSL family ligands, allowing it to participate in juxtacrine signaling.The Notch intracellular domain (NICD) acts as a transcriptional activator when in complex with CSL family transcription factors. Members of this Type 1 transmembrane protein family share several core structures, including an extracellular domain consisting of multiple epidermal growth factor (EGF)-like repeats and an intracellular domain transcriptional activation domain (TAD). Notch family members operate in a variety of different tissues and play a role in a variety of developmental processes by controlling cell fate decisions. Much of what is known about Notch function comes from studies done in Caenorhabditis elegans (C.elegans) and Drosophila melanogaster. Human homologs have also been identified, but details of Notch function and interactions with its ligands are not well known in this context.