Signal Regulatory Protein

Signal Regulatory Proteins (SIRPs) are a family of cell surface receptors that are involved in regulating various cellular functions, including immune responses, cell adhesion, and cell differentiation. They are primarily expressed on the surface of myeloid cells, such as macrophages, dendritic cells, and granulocytes.

There are several members of the SIRP family, including SIRPα, SIRPβ, and SIRPγ. SIRPα is the most extensively studied member and is involved in regulating immune cell activation through its interaction with CD47, a widely expressed cell surface protein. SIRPβ and SIRPγ are less well-characterized but are also thought to play important roles in immune regulation.

The SIRP family of proteins is also involved in cell adhesion, as they can interact with other proteins on neighboring cells or in the extracellular matrix. This interaction helps to regulate cell migration, tissue development, and wound healing.

In addition, SIRP proteins have been implicated in various diseases, including cancer, autoimmune disorders, and infectious diseases. As a result, there is ongoing research into the development of drugs that target the SIRP family of proteins as potential therapies for these diseases.