Gene polymorphism linked to increased asthma and IBD risk alters gasdermin-B structure, a sulfatide and phosphoinositide binding protein.

The exact function of human gasdermin-B (GSDMB), which regulates differentiation and growth of epithelial cells, is yet unknown. We show that a single nucleotide polymorphism in the GSDMB promoter is associated with increased asthma and IBD risk and alters the GSDMB crystal structure by forming a novel hydrophobic dimerization interface. Selective sulfatide binding may indicate possible function for GSDMB in the cellular sulfatide transport.