Sialophorin

Sialophorin, previously called gpL115, is the heavily sialylated surface protein that is defective in lymphocytes of Wiskott-Aldrich syndrome patients. Using the monoclonal antibody L10 as a probe, sialophorin expression was detected on isolated T lymphocytes and thymocytes, B cell lines, monocytes, neutrophils, and platelets, but not on erythrocytes, fibroblasts, and glioblastoma cells. This unusual distribution pattern suggests that sialophorin is expressed on all circulating cells except erythrocytes. Trace amounts of the sialophorin molecules on lymphocytes are incompletely sialylated, but significant amounts of the molecules on thymocytes are incompletely sialylated. The molecular form of sialophorin on T lymphocytes, thymocytes, and monocytes is the previously characterized species of apparent mol wt 115,000. A newly described sialophorin species of apparent mol wt 135,000 was found on neutrophils and platelets. The 115,000 lymphocyte/monocyte form and the 135,000 platelet/neutrophil form were shown to be substantially similar. The two forms have approximately the same content of sialylated O-linked carbohydrate units since both undergo the same atypical shift in electrophoretic mobility on desialylation. Both contain the epitope recognized by the monoclonal antibody L2 and the epitope recognized by L10 antibody. Moreover, evidence from another study indicates that the polypeptide portions are identical, cumulatively suggesting that 115,000 sialophorin and 135,000 sialophorin are identical except for the presence on the latter of additional neutral saccharide residues [1)].

Unclassified

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