

## ヒト樹状細胞リソソーム膜タンパク質は 肺胞Ⅱ型上皮細胞に発現している。

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### **Human dendritic cell lysosome-associated membrane protein expressed in lung type II pneumocytes.**

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**ABSTRACT** : Human dendritic cell LAMP (hDC-LAMP) is a unique member of the lysosome-associated membrane protein (LAMP) family with a tissue distribution initially described as restricted to major histocompatibility class II (MHC II) compartments of activated DC before the translocation of MHC II to the cell surface [Immunity 9 (1998) 325]. In this report, we show that hDC-LAMP is also expressed by lung type II pneumocytes, another cell type with constitutive expression of MHC II. A recombinant hDC-LAMP protein and a monospecific anti-hDC-LAMP polyclonal antibody were prepared. The antibody reacted specifically with hDC-LAMP sequences of hDC-LAMP protein expressed in transfected cells and with a 54 kDa protein of normal human lung tissue with properties corresponding to those of transgene expressed hDC-LAMP. Immunohistochemical analysis of hDC-LAMP in human lung showed its presence in alveolar type II epithelial cells (type II pneumocytes) as well as in cells in the interfollicular area of bronchus-associated lymph nodes, where interdigitating DCs are concentrated, and with lesser staining of alveolar macrophages. The native protein contained approximately 16% carbohydrates, most of which are sialyl N-linked oligosaccharides, with an acidic isoelectric point (pI 4.8). The restricted localization of this protein to lung type II pneumocytes and DCs is in contrast to hLAMP-1, which was present in many cell types of the lung and lymphnode. Type II pneumocytes are known to express MHC II and the abundant expression of hDC-LAMP in these cells as well as in DCs suggests its possible relationship to specific MHC II related function(s) of DC and type II pneumocytes.

抄録 ヒト樹状細胞のリソソーム膜タンパク質 (hDC-LAMP) は活性化した樹状細胞の主要組織適合遺伝子複合体クラス II (MHC II) が局在する細胞内のコンパートメントに局限することが示されている。本論文では、hDC-LAMPがヒト肺胞Ⅱ型上皮細胞に発現していることを示した。hDC-LAMPの組換え体を作製して、特異的ウサギポリクロナル抗体を調製した。抗体は遺伝子導入した細胞およびヒト肺の組織で、pI 4.8、54 kDaのシアロ化タンパク質と反応した。免疫組織化学的所見で、hDC-LAMPはヒト肺胞Ⅱ型上皮細胞に強く染色され、気管支に会合しているリンパ節の帽状域のTリンパ球群に入り込んだ樹状細胞にも強く染色された。また、肺胞マクロファージにも弱い染色が観察された。肺胞Ⅱ型上皮細胞にもMHC IIが発現しており、DC-LAMPはMHC IIに関係した機能を持つと推察された。

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