学位論文審査結果の要旨

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（学位論文審査結果の要旨）

Human Parainfluenza Virus Type 2 Vector Induces Dendritic Cell Maturation Without Viral RNA Replication/Transcription

著者らは論文において下記の内容を述べている。

The dendritic cell (DC), a most potent antigen-presenting cell, plays a key role in vaccine therapy against infectious diseases and malignant tumors. Although advantages of viral vectors for vaccine therapy have been reported, potential risks for adverse effects prevent them from being licensed for clinical use. Human parainfluenza virus type 2 (hPIV2), one of the members of the Paramyxoviridae family, is a nonsegmented and negative-stranded RNA virus. We have developed a reverse genetics system for the production of infectious hPIV2 lacking the F gene (hPIV2ΔF), wherein various advantages for vaccine therapy exist, such as cytoplasmic replication/transcription, nontransmissible infectivity, and extremely high transduction efficacy in various types of target cells. Here we demonstrate that hPIV2ΔF shows high transduction efficiency in human DCs, while not so high in mouse DCs. In addition, hPIV2ΔF sufficiently induces maturation of both human and murine DCs, and the maturation state of both human and murine DCs is almost equivalent to that induced by lipopolysaccharide. Moreover, alkylating agent β-propiolactone-inactivated hPIV2ΔF (BPL-hPIV2ΔF) elicits DC maturation without viral replication/transcription. These results suggest that hPIV2ΔF may be a useful tool for vaccine therapy as a novel type of paramyxoviral vector, which is single-round infectious and has potential adjuvant activity.

以上、本論文は、*F*遺伝子欠損型ヒトパラインフルエンザウイルス 2 型ベクターの免疫学的な特性、及び従来のウイルスベクターによる樹状細胞の成熟化機構とは異なる機構を当該ベクターが利用していることを世界で初めて明らかにしたものであり、将来、当該ベクターを用いたワクチン療法が新たな治療法として期待できることから、学術上極めて有益であると考え、学位論文として価値あるものと認めた。

Human Gene Therapy 2013;24:681-691
Published: July 22, 2013
doi:10.1089/hum.2013.024

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