

# モルモット中のメバロン酸二リン酸脱炭酸酵素の組織分布

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## **Tissue Distribution of Mevalonate Pyrophosphate Decarboxylase in Guinea Pig**

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**ABSTRACT:** We previously reported that mevalonate pyrophosphate decarboxylase (MPD) is located in the cytosol and that MPD in the liver was higher than in other rat tissues. In the present study, we further investigated the tissue distribution of MPD in guinea pigs by immunoblotting using anti-rat MPD antiserum. When immunoblot analysis was carried out using guinea pig brain, the antiserum reacted with 46 kDa protein as well as a substance with the same molecular weight of MPD in mice. Protein of 46 kDa detected in guinea pig liver treated with 0.1% pravastatin, HMG-CoA reductase inhibitor indicating a liver-specific effect, was increased 3-fold as compared with nontreated guinea pigs; however 46 kDa protein in the brain treated with pravastatin was similar to that treated without pravastatin. When the subcellular distribution of MPD in the brain, liver, kidney and testis, was examined by cell fractionation, MPD was mostly detected in the cytosol fraction of all tissues. From these data, 46 kDa protein was identified as MPD. Next, when the tissue distribution of MPD was examined, MPD in the liver was higher than in other tissues.

The relative amount of MPD in guinea pig kidney was higher than in rats and similar to in mice, as MPD in the liver of the same species was taken as 1. Furthermore, the correlation coefficient between guinea pigs and rats or mice in the tissue distribution of MPD was 0.69 or 0.72, respectively. These data indicate a relationship in tissue distribution between guinea pigs and rats or mice, although the tissue-specific regulator of MPD between species somewhat differed.

抄録 モルモット中のメバロン酸二リン酸脱炭酸酵素の組織分布を調べた。