

Role of CD13 in Alpha-Klotho-Dependent Mineral Homeostasis

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Summary

We have reported that CD13 binds alpha Klotho in kidney tubules through glucuronide-modification recognition. In parathyroid gland and choroid plexus as well, CD13 associates alpha Klotho. It has been also found that CD13 expression is altered in 3 mutant mice lines, that are FGF23-Tg, CLDN16-KO and AQP11-KO mice. Interestingly, in all the lines, α Klotho expressions were altered for the same direction as CD13 gene expression. Thus, we established CD13-KO mouse line and analyzed mineral parameters. As a result, we found that serum Ca levels were significantly elevated compared with those of WT mice when fed with low phosphorus containing diet. This fact demonstrated that mineral homeostasis was impaired in CD13-KO mice.