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128-133. P2X家族受体在急性T淋巴细胞白血病小鼠中表达的特点[J]. 种靖慧, 田晨, 师迎旭, 王金宏, 林永敏, 许静, 吴克复, 郑国光

P2X家族受体在急性T淋巴细胞白血病小鼠中表达的特点 [点此下载全文](#)

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摘要:

摘要 目的: 探讨不同P2X家族受体在小鼠急性T淋巴细胞白血病发展中的表达变化规律。方法: 制备Notch1过表达小鼠型, 流式术分选CD45.2+GFP+白血病细胞, 实时定量PCR检测P2X受体家族的表达变化, 荧光分光光度计检测P2X7受体介导的白血病小鼠骨髓细胞表达除P2X5外的其他6种P2X家族受体。Notch1过表达导致的小鼠白血病发展过程中, P2X7的表达逐渐降低, 而P2X2、P2X4和P2X6表达水平没有显著变化; 分选后的CD45.2+GFP+白血病细胞中, P2X家族受体的表达与骨髓细胞中P2X7受体在激动剂苯甲酰-苯甲酸ATP (BzATP) 的刺激下都能介导细胞内钙离子浓度升高, 但白血病组小鼠骨髓细胞内钙离子浓度短暂升高后逐渐下降; P2X7介导的这种钙离子反应可被其特异的拮抗剂KN62所阻断。结论: P2X7表达与小鼠急性T淋巴细胞白血病的发展相关, 提示其介导的细胞间通讯可能在白血病发展中发挥重要作用。

关键词: [P2X家族受体](#) [P2X7受体](#) [Notch1](#) [急性T淋巴细胞白血病](#)

Expression features of P2X family receptors in acute T lymphoblastic leukemia mouse model [Download](#)

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Abstract:

Abstract Objective: To investigate the expression features of P2X family receptors during the development of acute T lymphoblastic leukemia. **Methods:** A Notch1 over-expressing murine T cell induced-acute lymphoblastic leukemia was prepared. CD45.2+GFP+ leukemia cells were sorted by flow cytometry. The expressions of P2X family receptors were detected by real-time PCR. P2X7 receptor-mediated intracellular Ca²⁺ change was measured by fluorescent spectrophotometry in bone marrow cells (BMNCs) of both control and leukemia mice. All P2X receptors except for P2X5 were expressed in BMNCs of leukemia mice, but gradually decreased during the induction of T lymphoblastic leukemia; P2X1 and P2X3 receptors decreased; and P2X2, P2X4 and P2X6 receptors were not detectable. Similar expression patterns were observed in sorted CD45.2+GFP+ leukemia cells. P2X7 receptor-mediated calcium response was detected in BMNCs of both leukemia and control mice; and the response could be blocked by KN62. However, the calcium response showed different patterns: it sustained an increase in leukemia group, while reaching peak in the control group. **Conclusion:** P2X1, P2X3 and P2X7 receptor expressions are related to the development of murine acute T lymphoblastic leukemia, suggesting that intercellular communications mediated by these receptors play important roles in leukemia.

Keywords: [P2X family receptors](#) [P2X7 receptor](#) [Notch1](#) [acute T lymphoblastic leukemia](#)

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