

D-aspartic acid localization during postnatal development of rat adrenal gland

李仁愛

Kumiko Sakai;Hiroshi Homma;Jen-Ai Lee;Takeshi Fukushima;Tomofumi Santa;Ken
Tashiro;Takeshi Iwatsubo;and Kazuhiro Imai

Abstract

mental changes in cellular localization of D-aspartic acid (D-Asp) were investigated in rat adrenal gland with polyclonal anti-D-Asp antibody. At 1 and 3 weeks of age, immunoreactivity (IR) toward this amino acid was intense in the cytoplasm of cells in the zona fasciculata (ZF) and zona reticularis (ZR) of the adrenal cortex but was less so in the zona glomerulosa (ZG). Conversely at 8 weeks of age, intense IR was observed in the ZG and less in the ZF and ZR. In the adrenal medulla, IR was evident in large clusters of cells which were identified as adrenaline-storing cells. The emergence of D-Asp in specific types of cells at distinct periods of development of rat adrenal gland suggests that this amino acid may have a physiological role in the maturation of the organ.