

# **Immunohistochemical study of amoeboid microglial cells in fetal rat brain.**

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摘要

## **Abstract**

The present study examined the expression of different antigens in amoeboid microglial cells (AMC) in fetal rat brain extending from 12 to 20 d postconception (E12-E20) using a panel of monoclonal antibodies which recognised the major histocompatibility complex (MHC) class I (OX-18) and class II (OX-6) antigens, leucocyte common antigen (OX-1), CD4 receptor (OX-35), complement type 3 receptor (OX-42) or macrophage antigens of unknown function (ED1 and ED2). Of the above-mentioned antigens, ED1 and ED2-labelled AMC were observed in the neuroepithelia as early as embryonic day 12 (E12); other antigens were not detected at this stage. At E14, except for MHC class I antigen, all other antigens were expressed by AMC distributed predominantly in the developing white matter. At E16, AMC in the intermediate zone lateral to the striatum were endowed with all the above-mentioned antigens including MHC class I. At E18, the immunoreactivities of AMC stained with OX-6, OX-18, OX-35 and OX-42 antigens were noticeably reduced when compared with those cells at E16. At E20, amoeboid microglial cells exhibited full complement of antigen expression similar to those cells at E16; some of the labelled cells emitted a variable number of cytoplasmic processes. It is suggested that the successive and differential expression of various macrophage related antigens on AMC in fetal brain is related to the specific requirement of local environment in different stages of development.