P048 Testican expression in the developing cerebral cortex

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Testican is an important extracellular heparin chondroitin sulfate proteoglycan that is expressed in the brain. There is 95% amino acid identity between human and mouse testican, indicating that the protein is highly conserved, and therefore likely to have an important function in the central nervous system. Since there is evidence that testican is most highly expressed in the brain, and that it is an extracellular proteoglycan, it is expected that testican may be part of the proteoglycan-rich extracellular matrix of the brain. The function of testican, which is a relatively recently defined gene product, is unknown. In order to gain functional insight about testican during embryogenesis, the protein level in the developing chick cerebral cortex extracts (embryonic day 14-20) was analysed using SDS-PAGE followed by silver staining. A Western blot analysis using anti-testican antibody as a probe confirmed the presence of testican in the cerebral cortex extracts. By comparing the intensity of bands, it was shown that the level of testican in the cerebral cortex extracts at embryonic day 17 and 18 is clearly higher than in the extracts from day 14, 15, 16, 19 and 20. since at embryonic days 17 and 18 there is a maximum neural cell proliferation and migration from the germinal neuroepithelium of the developing cerebral cortex, thus it is concluded that testican may be involved in the correct stratification, proliferation and migration of neural cells produced in the germinal epithelium of developing cerebral cortex.