

Z502 Influence of Caffeine on the Dopamine D₁ and D₂ Receptor mRNAs in the Rat Striatum

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The long term intake of caffeine has caused an excited condition of antagonist action that related to the release of the dopamine (DA) in the rat brain. The aim of this study was to examine the effect of caffeine on the DA D₁ and D₂ receptor mRNAs in the rat striatum with *in situ* hybridization. Adult male rats were administrated orally with caffeine agent during four weeks. The DA D₁ and D₂ receptor mRNAs in the caffeine treated group were higher expressed. The quantitative analysis on the control group and the caffeine treated group were 2.52 ± 0.8 and 2.46 ± 0.90 , and 7.76 ± 2.09 and 5.18 ± 1.11 of DA D₁ and D₂ respectively. These results suggest that the intake of caffeine has the upregulator effect on the DA D₁ and D₂ receptor mRNAs in the striatum.

Z503 Generation, Characterization and Fine Epitope Mapping of Aurora-7, a Novel Monoclonal Antibody for Urocortin

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Urocortin is a corticotropin releasing factor-like neuropeptide that is produced in the hypothalamus and acts in the pituitary to regulate and coordinate the biological response upon stress. So far the detection of urocortin was limited to polyclonal antisera, which had many limitations for performing extensive studies on the functional role of urocortin. In the present study, a novel monoclonal antibody termed Aurora-7 was generated, and its specificity was confirmed in ELISA and Western blot analysis. Using computer modelling the 3-dimensional structure of this 40-meric peptide was evaluated, and by construction of various recombinant urocortin deletion mutant proteins, the binding region of Aurora-7 on urocortin was mapped. These results show that Aurora-7 binds to the C-terminal end of urocortin, which in turn is believed to be essential for receptor binding. Possible applications of Aurora-7 will be discussed.