

NPY1 Receptors Participate in the Regulation of Myocardial Contractility in Rats

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Abstract

© 2017, Springer Science+Business Media New York. Selective agonist (Leu(31)Pro(34)NPY) and blocker (BIBP-3226) of NPY1 receptors were used to determine the type of NPY receptors involved in myocardial contraction. Experiments with isometric contraction of myocardial strips from mature rats showed that the agonist produced the most potent effect in a concentration of 10^{-7} M. In this concentration, Leu(31)Pro(34)NPY showed the greatest positive inotropic effect on the contraction of the atria and ventricles. In contrast, selective blocker BIBP-3226 reduced the force of myocardial contractions. Pretreatment of myocardial strips with this blocker abolished the positive inotropic effect of Leu(31)Pro(34)NPY, which attested to important role of NPY1 receptors in myocardial contraction.

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Keywords

myocardial contractility, neuropeptide Y, rat, types of NPY receptors

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