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Title: Emodin Down-Regulates Expression of TRPV1 mRNA and Its Function in DRG Neurons *in Vitro*

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Abstract: Emodin is a principle ingredient isolated from rhubarb rhizome, which is commonly used for constipator medicine (TCM) practice. The transient receptor potential vanilloid 1 ion channel proteins (TRPV1) are a neurons and are assumed to act as a kind of nociceptor involved in the perception of pain and developn to further unravel the analgesic mechanisms of rhubarb through investigating the effects of its main cor of TRPV1 mRNA as well as on its calcium- mediating functions *in vitro*. The primary DRG neurons with a the TRPV1 mRNA expression levels were examined by using real-time RT-PCR and the elevated amplitu evoked by TRPV1 agonist capsaicin were examined by confocal microscopy. The results showed that em mRNA expression of TRPV1 and the capsaicin-evoked intracellular fluorescent intensity in the DRG neur Concomitantly, all of the changes induced by emodin could not be blocked by pretreatment of the prime TRPV1. In conclusion, we established that the mRNA expression level of TRPV1 and its calcium-mediati down-regulated by emodin through perhaps the non-TRPV1 channel pathways, and this might be the m hyperalgesia induced by inflammatory stimuli.

Keywords: Emodin; TRPV1; Analgesic; DRG; Capsaicin

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