

Effect of AquaCacteen on the Electrophysiologic Activity of Sensory Neurons in Co-Culture with Keratinocytes

BIOalternatives, Pharmaceutical Division, 86160 Gençay, France
 Sponsor:
 Mibelle AG - Biochemistry, 5033 Buchs, Switzerland

Introduction

Effect of AquaCacteen on the electrophysiologic activity of sensory neurons. Lidocaine as a local anaesthetic decreases specifically the electrophysiological activity of sensory neurons and served as a positive control.

Test Products

- AquaCacteen 0.33%
- Lidocaine (positive control) 10^{-6} M

Cell Line

- Rat sensory neurons in coculture with normal human epidermal keratinocytes (NHEK)

Coculture Medium

- DMEM – Ham F12 (Invitrogen 21331-020)

Study Design

Dissociated sensory neurons were cultivated in coculture medium in a 96 wells plate (12'500 cells per well) and incubated. After 10 days of culture, normal human

keratinocytes were seeded in each well of sensory neurons (5'000 cells per well).

Cells were totally incubated for 50 minutes. The last 20 minutes cells were stimulated by coculture medium containing or not (control) the tested compounds and 10^{-6} M of capsaicin. Supernatants were collected and frozen to analyze CGRP release.

The quantities of CGRP release spontaneously and after stimulation by capsaicin in supernatants were measured by an ELISA test.

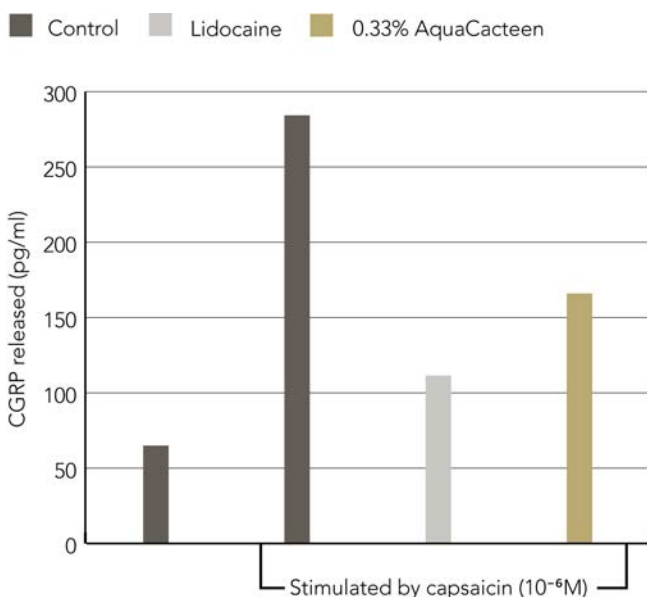
Test Parameter

- Calcitonin Gene-Related Peptide (CGRP) in the supernatant by ELISA test
- Capsaicin sigma M2028

Results

Stimulation of the cells with capsaicin resulted in a large release of CGRP. 0.33% AquaCacteen reduced this cell response by 42 %.

Release of CGRP after Stimulation with Capsaicin



S-098/DMibelle Biochemistry