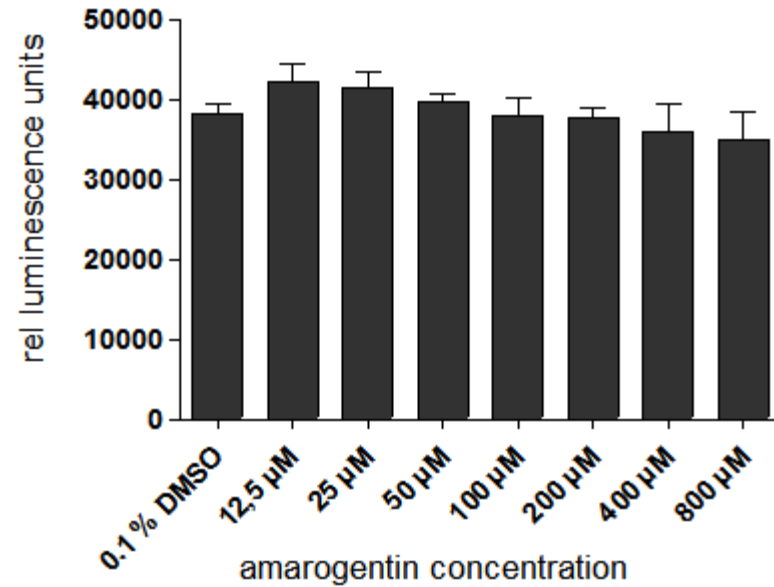
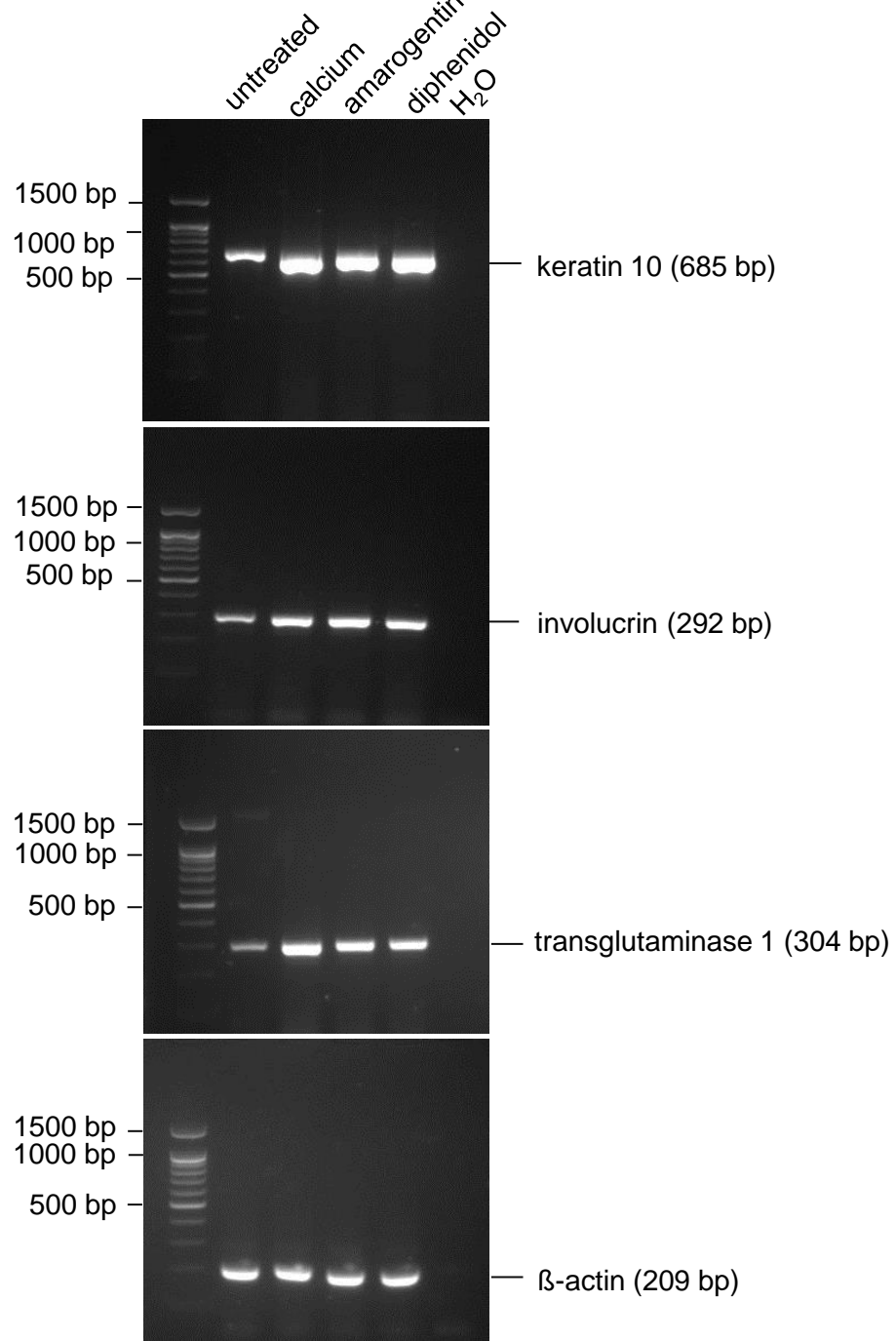


A

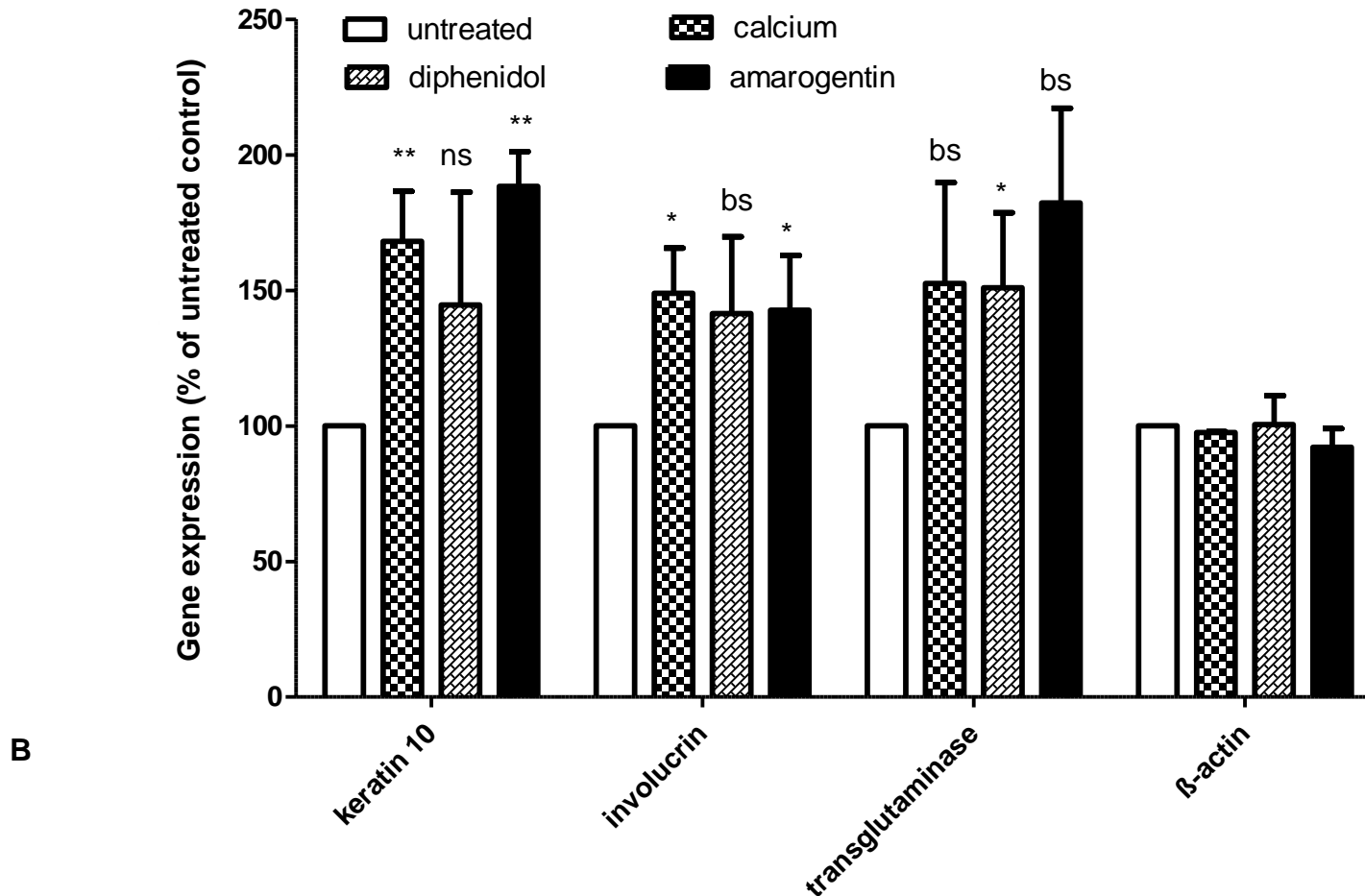


B

Cytotoxicity of diphenidol and amarogentin was assessed by luminometric measurement of ATP that is present in metabolically active cells with the ViaLight Plus ATP assay (Cambrex, Verviers, Belgium) according to the manufacturers protocol. Luciferase catalyzes the formation of light from ATP and luciferin. The emitted light intensity is linearly related to the ATP concentration and is measured using a luminometer. All data are expressed as mean + standard deviation (SD) of one of three independent experiments with similar results. Until 400 μ M both bitter compounds showed no cytotoxicity.



A



Calcium, diphenidol and amarogentin induce differentiation markers in HaCaT cells. HaCaT cells were incubated for 72 h in calcium-free medium, 2 mM calcium (positive control), 100 μ M diphenidol or 100 μ M amarogentin. Total RNA of HaCaT cells was isolated, reverse transcribed and subjected to keratin 10, involucrin and transglutaminase1 semi-quantitative RT-PCR. (A) The figure shows one of three independent experiments with similar results. (B) The histogram shows the relative expression level of keratin 10, involucrin or transglutaminase 1 compared to their normalized expression level in untreated control cells. The values are the Asterisks denote statistical significance compared to the solvent. ** $p < 0.01$, * $p < 0.05$; bs, borderline significant ($p \geq 0.05$ and $p < 0.07$), ns, not significant.