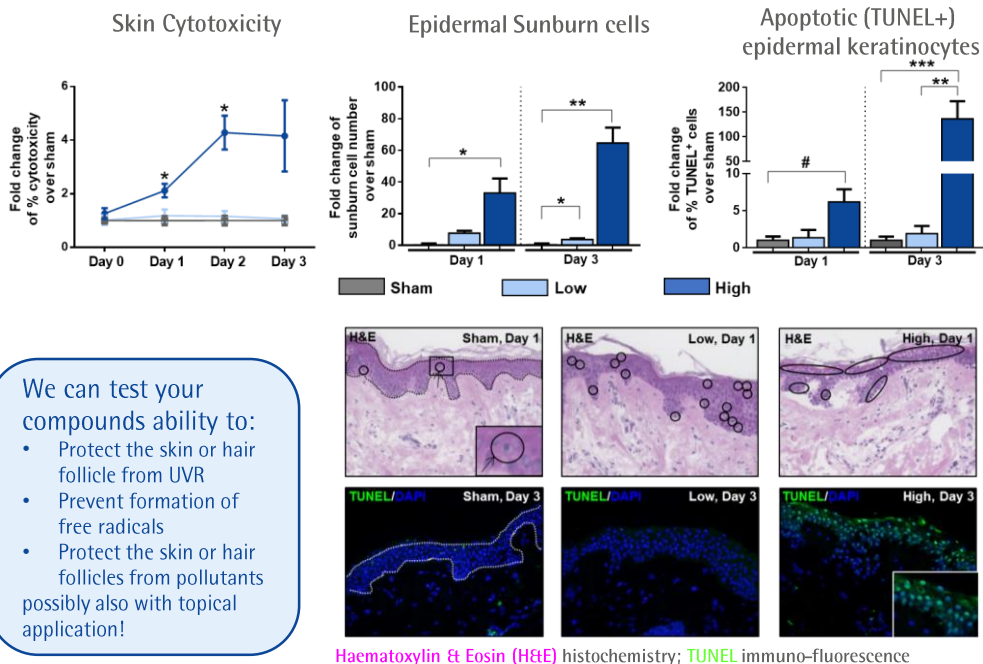


Investigating the effect of UV irradiation on skin

Study example: UVR exerts skin cytotoxicity and epidermal damage *ex vivo*



low = 10J/cm² UVA+
20mJ/cm² UVB
high = 50J/cm² UVA
+ 50mJ/cm² UVB
(solar UV spectrum)

Our method:
Human full-thickness skin *ex vivo* organ culture

Read-outs:
viability,
proliferation and
apoptosis,
necroptosis, DNA
damage, sunburn
cells...

Stressors
available: UVR,
pollution,
hydrogen
peroxide,...

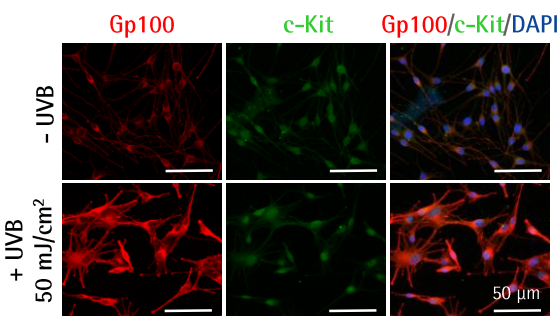
Selection of our publications on the topic:
Gherardini et al., Int J Cosm Sci 2019; Poeggeler et al., Exp Dermatol 2010; Lu et al., J Invest Dermatol. 2009; Bodo et al., Am J Pathol 2007

We can test your compounds ability to:

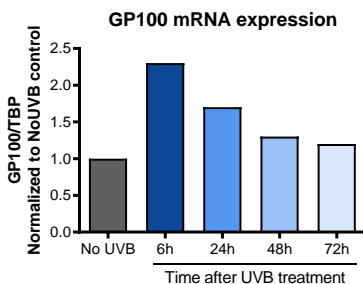
- Protect the skin or hair follicle from UVR
- Prevent formation of free radicals
- Protect the skin or hair follicles from pollutants possibly also with topical application!

Study example: UVR stimulates melanogenesis *in vitro*

UVB treatment of melanocytes increased the expression of the melanogenesis associated marker GP100 and the level of tyrosinase

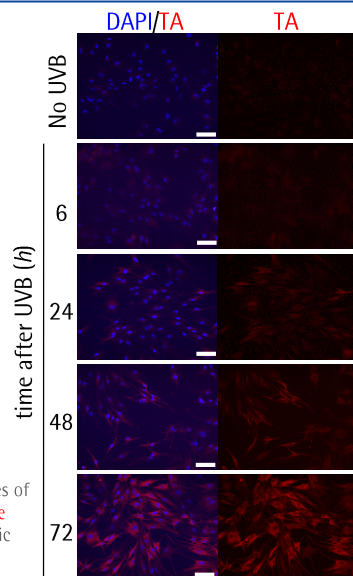


Representative images of Gp100 and c-Kit immunofluorescence in melanocytes without or 6 h after UVB treatment.

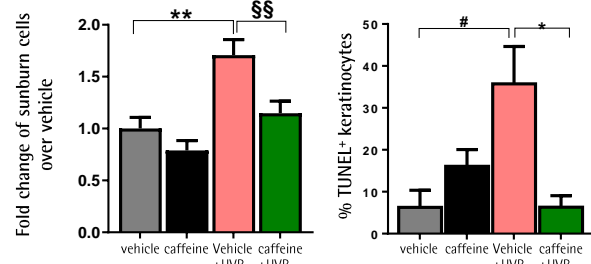


GP100 mRNA relative expression in the NHEMs was measured at different timepoints after UVB irradiation, housekeeping gene: TBP.

Representative images of the level of tyrosinase detected by enzymatic activity assay.

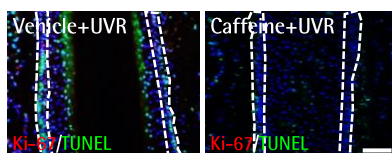


Study example: Caffeine protects cells from UV damage *ex vivo*



Number of sunburn cells in the epidermis of vehicle or caffeine treated skin. Pooled data from 2 donors, mean±SEM, **p<0.01, §§p<0.01.

Number of TUNEL+ keratinocytes in distal ORS of vehicle or caffeine treated HF. Pooled data from 2 donors, mean±SEM, *p<0.05, #p<0.05.



Representative images of Ki-67 and TUNEL Positive cells in the proximal hair follicle ORS.

Contact us for a customized study:

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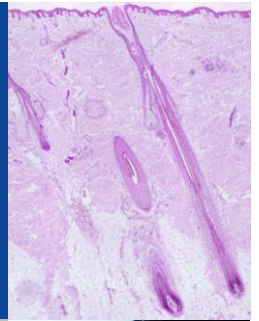
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