



In vitro and ex vivo safety evaluation of εὖSKIN® products

In vitro evaluation of **EUSKIN**[®] reveals outstanding biocompatibility, with no observed toxicity and no induction of cell death in *ex vivo* human blood cells and *in vitro* keratinocyte cell cultures. Moreover, *in vitro* tumorigenicity assessment demonstrates that it is non-carcinogenic, rendering it safe for dermaceutical applications.



The biocompatibility of **ευ̃SKIN**[®] products was assessed through *ex vivo* human blood haemolysis assays.

The evaluation involved measuring free hemoglobin levels using Hemoglobin Colorimetric Assays in freshly isolated plasma.

This enabled the assessment of red blood cell breakdown and haemoglobin release. Notably, none of our products demonstrated hemolysis when compared to both positive and negative controls, affirming their safety for use.





Tumorigenicity



The safety of **EUSKIN**[®] and its constituents was evaluated *in vitro* using the MTT assay on two distinct cancer cell lines: SKOV3 (ovarian cancer cells) and HT-29 (colorectal cancer cells).

The assessment of tumorigenicity unveiled that **EUSKIN**[®] exhibits anti-proliferative effects on cancer cells, thereby indicating its safety for use as a dermaceutical product.

The wound-healing effectiveness of our innovative **EUSKIN**[®] formulation was rigorously evaluated through a series of comprehensive tests, including *ex vivo* human skin wound models, *in vitro* scratch assays on cultured human keratinocytes and skin penetration testing on human skin biopsies.





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In *ex vivo* experiments on human skin tissues, atelocollagen peptides (one of the **EUSKIN**® active ingredients) exhibited **enhanced permeability** through both layers of the skin (epidermis & dermis), **stimulating production of structural proteins** and positively impacting skin health and function.

The *in vitro* application of **EUSKIN**[®] in keratinocytes showcased a remarkable **64% improvement in wound closure rate** (measured at distinct time points), significantly expediting the dynamics of wound healing compared to the controls.

Our investigation into the effect of **EUSKIN**® on *ex vivo* skin biopsies revealed accelerated wound healing compared to control samples, with **3x faster wound healing rates**.





Early phase Early phase Control EVSKIN Late phase Late phase Control EVSKIN Control EVSKIN