

A Standardized Assay for Test of Pigmentation

서영권, 신연호, 이수연, 송계용¹, 양은경², 박정극*
동국대학교; ¹중앙대학교 병리학교실; ²(주)바이오랜드
(jkpark@dongguk.edu*)

Effects of chemical or biological compounds on mammalian pigmentation have been reported by many researcher. Many melanocyte or artificial skin models have been used to evaluate the potential efficacy of melanogenic compounds to regulate pigmentation. However, in the skin and hair, melanocytes interaction with keratinocyte, fibroblasts, and other cell types, and testing of compounds on melanocytes alone in culture does not allow one to observe the interactions with those other cell types, such as wound occur in vivo.

We have developed a model that use immortalized murin melanocytes(melana) or melanocyte in pure / coculture.

We developed a melana or melanocyte-human skin keratinocyte pure / coculture protocol that allows testing of compounds for potential effects on pigmentation. We have standardized it with known melanogenic inhibitor (arbutin) and stimulator (α -melanocyte stimulating hormone, UVB-irradiation). After treatment of melanocytes with bioactive compounds, cell viability, total melanin contents, and tyrosinase activity are measured.