

Development of α -MSH (Melanocyte Stimulating Hormone) inhibitor screening method by SPR(Surface Plasmon Resonance)

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Abstract

MC1R is a transmembrane receptor in melanocyte. α -MSH (Melanocyte Stimulating Hormone), produced by UV irradiation, binds to MC1R, and initiate the melanogenesis in the melanocyte.

In this study, we developed α -MSH-inhibitor screening method by using SPR sensing of α -MSH-MC1R binding.

B16F10 melanoma cell was directly in-situ immobilized on the gold chip. To increase the durability of the cell-attached gold chip, cell was fixed by various fixing solutions. Under these conditions, binding of α -MSH on the cell could be detected by SPR.

1. Science 1992;257:1248-51

The cloning of a family of genes that encode the melanocortin receptors.

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2. ITARU SUZUKI, ROGER D. CONE et al., Binding of Melanotropic Hormones to the Melanocortin Receptor MC1R on Human Melanocytes Stimulates Proliferation and Melanogenesis(1996)., Endocrinology 137:1627-1633,

SPR(Surface Plasmon Resonance)을 이용한 α -MSH 억제제 스크리닝 시스템 개발