

〈原 著〉

紫外線誘起炎症応答に対するレドックス制御の影響

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Redox System Regulates UV Induced-Inflammation in Human Epidermal Cells

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Abstract

Exposure of the human skin to ultraviolet (UV) radiation induces inflammatory responses which are responsible for the photooxidative damage. Transcription factor nuclear factor kappa B (NF- κ B) is involved in the transcription of genes whose protein products participate in inflammatory responses. It was previously reported that UVB light induced activation of NF- κ B in human keratinocyte cell line. In this report, we show that N-acetyl-L-cysteine (NAC) and DL- α -lipoic acid inhibit the UVB-induced NF- κ B activation in the cells. NAC also suppressed the UVB-induced production of IL-1 α which is an inflammatory cytokine. It is known that both compounds act as antioxidants by regulating redox state as well as trapping reactive oxygen species in cells. These results suggest that redox regulating antioxidants can be protective against photooxidative damage in skin.

Key words: ultraviolet light, nuclear factor kappa B, redox system, N-acetylcysteine, lipoic acid.