

Up-regulation of Id1 in peripheral blood of psoriatic patients

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ABSTRACT. Although the precise causes of psoriasis are unclear, it is widely accepted that psoriasis is a disorder in which factors in the immune system, enzymes, and other biochemical substances that regulate skin cell division are impaired, leading to rapid proliferation of keratinocytes and incomplete keratinization. Expression of the helix-loop-helix transcription factor Id1 (inhibitor of differentiation/DNA binding), functioning as an inhibitor of differentiation, is known to increase in psoriatic skin. However, the molecular involvement of this particular biomarker in the psoriatic immune system remains to be elucidated. We measured Id1 mRNA expression in peripheral blood mononuclear cells (PBMCs) of psoriatic patients and healthy controls using semi-quantitative reverse transcriptase-

PCR. The normalized level of Id1 transcripts in psoriatic patients was about 2-fold higher than that in controls ($P < 0.05$). When we examined the proliferation rate of PBMCs, the stimulation index obtained from the phytohemagglutinin stimulation assay was not significantly different in psoriatic patients. In patients with psoriasis, there was no correlation between the stimulation index and the psoriasis area severity index. We suggest that Id1 has a role in causing psoriatic immune cell symptoms.

Key words: PBMCs; Psoriasis; Gene expression analysis; Proliferation; Id1; mRNA