

## **The study of melanin production in human skin induced by sex hormone and sex hormone binding protein**

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Sex hormone is known to be associated with the increase of human melanocytes and melanin production. However, the absence of estrogen receptor  $\alpha$ , that was cloned in 1986, in melanocytic lesions has been confirmed to date. In 1996, the new subset of estrogen receptor was cloned, and named estrogen receptor  $\beta$ . We studied immunohistochemical staining of estrogen receptor  $\alpha$  and  $\beta$  in melanocytic nevi and malignant melanomas, and found that both lesions were stained by estrogen receptor  $\beta$ , but not stained by estrogen receptor  $\alpha$ . The normal sebaceous glands and hair follicles were positive for estrogen receptor  $\alpha$  and  $\beta$ . Other adnexal structures in the skin were stained by estrogen receptor  $\beta$ , but not stained by estrogen receptor  $\alpha$ .