

**SUMMARY** Osteopontin (OPN) is an adhesive, matricellular glycoprotein, whose expression is elevated in many types of cancer and has been shown to facilitate tumorigenesis in vivo. To understand the role of OPN in human skin cancer, this study is designed to determine whether OPN is expressed in premalignant [solar/actinic keratosis (AK)] and in malignant skin lesions such as squamous cell carcinomas (SCC) and basal cell carcinomas (BCC), as well as in normal skin exposed or not exposed to sunlight. Immunohistochemical analyses showed that OPN is expressed in SCC (20/20 cases) and in AK (16/16 cases), which are precursors to SCC, but is absent or minimally expressed in solid BCC (17 cases). However, positive staining for OPN was observed in those BCC that manifest differentiation toward epidermal appendages such as keratotic BCC. In sunlight-exposed normal skin, OPN is minimally expressed in the basal cell layer, but in contrast to those not exposed to sunlight, OPN is more prominent in the spinous cell layer with increasing intensity toward the granular cell layer. Additionally, OPN is expressed in the hair follicles, sebaceous glands, and sweat glands of normal skin. In conclusion, these data suggest that OPN is associated with keratinocyte differentiation and that it is expressed in AK and SCC, which have metastatic potential, but minimally expressed in solid BCC. (J Histochem Cytochem 56:57-66, 2008)

**KEY WORDS**

osteopontin  
actinic keratosis  
squamous cell carcinoma  
basal cell carcinoma  
differentiation  
apoptosis  
epidermis  
calcitriol  
ultraviolet light