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Menadione Topical Lotion

National Cancer Institute

Source

National Cancer Institute. *Menadione Topical Lotion*. NCI Thesaurus. Code C84863.

A topical lotion containing the small organic molecule protein tyrosine phosphatase (PTP) inhibitor menadione (vitamin K3) with potential EGFR- and ErbB2/HER2-activating activities. Upon topical administration, menadione binds to and inhibits the activity of PTPs that dephosphorylate and inactivate EGFR and ErbB2 in human keratinocytes; local reversal of EGFR and ErbB2 inhibition associated with the systemic administration of EGFR inhibitors may help alleviate EGFR inhibitor-mediated skin toxicity. EGFR (epidermal growth factor receptor) and ErbB2/HER2 (erythroblastic leukemia viral oncogene homolog 2/ human epidermal growth factor receptor 2) are cell surface receptors that are upregulated in a number of cancer cells types and play important roles in the growth and maintenance of normal epithelial tissues.