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Topical Sirolimus

National Cancer Institute

Source

National Cancer Institute. *Topical Sirolimus*. NCI Thesaurus. Code C107244.

A topical formulation containing the macrolide sirolimus (rapamycin), which is produced by the organism *Streptomyces hygroscopicus*, with potential anti-proliferative activity. Upon application of topical sirolimus, this agent migrates into the skin and is internalized by the affected cells. In turn, sirolimus binds to the immunophilin FK binding protein-12 (FKBP-12) and forms a sirolimus:FKBP-12 complex. This complex binds to and inhibits the activity of the serine/threonine kinase mammalian target of rapamycin (mTOR). It also decreases the production of vascular endothelial growth factor (VEGF) and results in the suppression of cellular proliferation.