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CYP17/Androgen Receptor Inhibitor ODM 204

National Cancer Institute

Source

National Cancer Institute. *CYP17/Androgen Receptor Inhibitor ODM 204*. NCI Thesaurus. Code C120304.

An orally available inhibitor of both the steroid 17-alpha-hydroxylase/C17,20 lyase (CYP17A1 or CYP17) and androgen receptor (AR), with potential anti-androgen and antineoplastic activities. Upon oral administration, CYP17/AR inhibitor ODM 204 selectively inhibits the enzymatic activity of CYP17A1 in both the testes and adrenal glands, thereby inhibiting androgen production. This may both decrease androgen-dependent growth signaling and inhibit the proliferation of androgen-dependent tumor cells. In addition, ODM 204 binds to ARs in target tissues and inhibits androgen-induced receptor activation and AR nuclear translocation, which prevents the binding to and transcription of AR-responsive genes. This leads to an inhibition of growth in AR-expressing prostate cancer cells. The cytochrome P450 enzyme CYP17A1, which is localized to the endoplasmic reticulum, exhibits both 17alpha-hydroxylase and 17,20-lyase activities.