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# ATR Kinase Inhibitor VX-803

National Cancer Institute

## Source

National Cancer Institute. *ATR Kinase Inhibitor VX-803*. NCI Thesaurus. Code C129693.

An orally available inhibitor of ataxia telangiectasia and Rad3 related (ATR) kinase, with potential antineoplastic activity. Upon oral administration, ATR kinase inhibitor VX-803 selectively inhibits ATR activity and blocks the downstream phosphorylation of the serine/threonine protein kinase CHK1. This prevents ATR-mediated signaling, which results in the inhibition of DNA damage checkpoint activation, the disruption of DNA damage repair, and the induction of tumor cell apoptosis. ATR, a serine/threonine protein kinase upregulated in a variety of cancer cell types, plays a key role in DNA repair, cell cycle progression and survival; it is activated by DNA damage caused during DNA replication-associated stress.