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# Mutant p53 Activator COTI-2

National Cancer Institute

## Source

National Cancer Institute. *Mutant p53 Activator COTI-2*. NCI Thesaurus. Code C121951.

An orally available third generation thiosemicarbazone and activator of mutant forms of the p53 protein, with potential antineoplastic activity. Upon oral administration, mutant p53 activator COTI-2 targets and binds to the misfolded mutant forms of the p53 protein, which induces a conformational change that normalizes p53 and restores its activity. This induces apoptosis in tumor cells in which the p53 protein is mutated. In addition, COTI-2 inhibits the activation of Akt2 and prevents the activation of the PI3K/AKT/mTOR pathway, thereby inducing apoptosis in cancer cells in which this pathway is overexpressed. p53, a tumor suppressor protein, plays a key role in controlling cellular proliferation and survival. High levels of mutant p53 are seen in many cancers and are associated with uncontrolled cellular growth.