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Splicing Inhibitor H3B-8800

National Cancer Institute

Source

National Cancer Institute. *Splicing Inhibitor H3B-8800*. NCI Thesaurus. Code C129546.

An orally bioavailable inhibitor of the splicing factor 3B subunit 1 (SF3B1), with potential antineoplastic activity. Upon administration, H3B-8800 binds to and blocks the activity of SF3B1, a core spliceosome protein that is mutated in various cancer cells. This modulates RNA splicing by preventing aberrant mRNA splicing by the spliceosome, blocks RNA mis-splicing, enhances proper RNA splicing and prevents the expression of certain tumor-associated genes. This leads to an induction of apoptosis and prevents tumor cell proliferation. In many cancer cells, core spliceosome proteins, including SF3B1, U2 small nuclear ribonucleoprotein auxiliary factor 1 (U2AF1), serine/arginine-rich splicing factor 2 (SRSF2) and U2 small nuclear ribonucleoprotein auxiliary factor subunit-related protein 2 (ZRSR2), are mutated and aberrantly activated leading to a dysregulation of mRNA splicing.