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TLR8 Agonist DN1508052

National Cancer Institute

Source

National Cancer Institute. *TLR8 Agonist DN1508052*. NCI Thesaurus. Code C160500.

A small molecule Toll-like receptor 8 (TLR8; CD288) agonist with potential immunostimulating and antineoplastic activities. Upon subcutaneous administration, TLR8 agonist DN1508052 binds to TLR8, which is expressed in myeloid dendritic cells (mDCs), monocytes, and natural killer (NK) cells. This may lead to the activation of nuclear factor NF-kappa-B, the release of proinflammatory cytokines and a Th1-weighted anti-tumor immune response. Additionally, activation of TLR8 signaling in tumor cells may block the induction and reverse the suppression of senescent naïve and tumor-specific T-cells, resulting in enhanced anti-tumor immunity. TLR8, like other TLRs, recognizes pathogen-associated molecular patterns (PAMPs) and plays a key role in innate and adaptive immunity.