Anti-CD352 Antibody-drug Conjugate SGN-CD352A

National Cancer Institute

Source

National Cancer Institute. Anti-CD352 Antibody-drug Conjugate SGN-CD352A. NCI Thesaurus. Code C131174.

An antibody-drug conjugate (ADC) consisting of an engineered cysteine humanized monoclonal antibody (EC-mAb) targeting CD352 (SLAM family member 6; SLAM6) that is conjugated to the cytotoxic, DNA minor-groove crosslinking agent pyrrolobenzodiazepine (PBD) dimer, with potential antineoplastic activity. Upon administration of anti-CD352 ADC SGN-CD352A, the antibody moiety targets the cell surface antigen CD352. Upon antibody/antigen binding, internalization, and lysosome uptake, the cytotoxic PBD moiety is released. In turn, the imine groups of the PBD moiety bind to the N2 positions of guanines on opposite strands of DNA. This induces DNA strand breaks, inhibits DNA replication, leads to G2/M cell cycle arrest, induces cell death, and inhibits the proliferation of CD352-overexpressing tumor cells. CD352, a tumor-associated antigen (TAA), is overexpressed on a variety of cancers. Cysteine engineering of the monoclonal antibody allows for a site-specific, stable conjugation and uniform loading of the PBD agent to the antibody.