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# Anti-PSMA/PBD ADC MEDI3726

National Cancer Institute

## Source

National Cancer Institute. *Anti-PSMA/PBD ADC MEDI3726*. NCI Thesaurus. Code C140552.

An antibody-drug conjugate (ADC) consisting of an engineered version of anti-human prostate-specific membrane antigen (PSMA) monoclonal antibody J591 conjugated, via a valine-alanine dipeptide linker, to tesirine, a cytotoxic, DNA minor groove crosslinking agent and pyrrolobenzodiazepine (PBD) dimer, with potential antineoplastic activity. Upon administration of anti-PSMA/PBD ADC MEDI3726, the antibody moiety targets the cell surface antigen PSMA, which is found on prostate cancer cells. Upon antibody/antigen binding, internalization and lysosome-mediated cleavage of the dipeptide linker, 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 PSMA-overexpressing tumor cells. PSMA is overexpressed by prostate cancers; its expression is associated with poor prognosis and metastasis.