



## NIH AIDS Reagent Program

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### DATA SHEET

**Reagent:** Zidovudine (AZT)

**Catalog Number:** 3485

**Lot Number:** 01983

**Release Category:** E

**Provided:** 20 mg

**Chemical Name:** 3'-azido-3'-deoxythymidine

**Empirical Formula:** C<sub>10</sub>H<sub>13</sub>N<sub>5</sub>O<sub>4</sub>

**Molecular Weight:** 267

**CAS Num:** 30516-18-1

**Purity:** > 90%

**Solubility:** DMSO; also soluble in water to about 20 mg/ml.

**Mechanical Action:** Zidovudine is a nucleoside analogue of the naturally occurring nucleoside, thymidine. Zidovudine is converted to zidovudine 5'-triphosphate by cellular enzymes. Zidovudine 5'-triphosphate inhibits the activity of the HIV-1 reverse transcriptase by competing with utilization of natural substrate, deoxythymidine 5'-triphosphate and by its incorporation into viral DNA. The lack of 3'-OH group in the incorporated nucleoside analogue prevents the formation of the 5' to 3' phosphodiester linkage essential for DNA chain elongation. Zidovudine 5'-triphosphate is also a weak inhibitor of cellular DNA polymerase and mitochondrial polymerase.

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ALL RECIPIENTS OF THIS MATERIAL MUST COMPLY WITH ALL APPLICABLE BIOLOGICAL, CHEMICAL, AND/OR RADIOCHEMICAL SAFETY STANDARDS INCLUDING SPECIAL PRACTICES, EQUIPMENT, FACILITIES, AND REGULATIONS. NOT FOR USE IN HUMANS.

**Recommended Storage:** Room temperature. Once resuspended, working aliquots can be stored at  $-20^{\circ}\text{C}$ .

**Contributor:** Division of AIDS, NIAID.

**NOTE:** Acknowledgment for publications should read "The following reagent was obtained through the NIH AIDS Reagent Program, Division of AIDS, NIAID, NIH: Zidovudine."  
This compound is limited to 40 mg per requester per year.

**Recipient agrees that the reagent (Zidovudine (AZT)) use is permitted only as a standard for in vitro and/or studies in animals for inhibition of HIV replication.**

**Last Updated** July 24, 2018

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