

ddNTPs in combination with modified Taq DNA Polymerase are used as 3'-end chain terminators in Sanger sequencing. @ pH 8,0 in water the high purity between 98 – 99 % (HPLC) offers a great performance in chain termination sequencing.

The nucleotides are especially manufactured and tested for application in sequencing reactions.

Application:

2',3'-Dideoxynucleoside triphosphates inhibit the chain elongation of a given primer catalyzed by the DNA polymerase (e.g. Klenow enzyme) and are therefore used for DNA sequencing according to Sanger. Sequencing is achieved by including in each reaction a dideoxynucleotide that acts as a chain terminator. Four reactions are set up, each containing the same template and primer but a chain terminator specific for A, C, G or T. Because only a small amount of the chain terminator is included, incorporation into the new DNA strand is a random event. Each reaction therefore generates a collection of fragments, but every DNA strand will end at the same type of base (A, C, G or T).

Note: spin all reagents in the vial before opening and after setting up the Termination Mix

Transport: on blue ice or ambient temperature

Storage: few day at room temperature; for long term storage @ -20 °C

Quality tests:

The ddNTPs are tested:

- for the absence the absence of DNases and RNases
- for successfully sequencing reaction
- produced in German factory (ISO: 9001/2001)

Standard protocol for 50 µl "Termination" Mix:

Component	Volume	final concentration
dNTP's (1 mM each)	5 µl of each dNTP	400 µM
ddNTP's (10 µM)	2 µl	0,4 mM
Water	25 µl	
Total volume	50 µl	

Order Information

Prod. No.	Description	Quantity
1910-020	Set of ddNTP	4x 200 µg
1910-025	Set of ddNTP	4x 1000 µg
1910-020A	ddATP 10 mM	200 µl (2 µmol)
1910-025A	ddATP 10 mM	1000 µl (10 µmol)
1910-020C	ddCTP 10 mM	200 µl (2 µmol)
1910-025C	ddCTP 10 mM	1000 µl (10 µmol)
1910-020G	ddGTP 10 mM	200 µl (2 µmol)
1910-025G	ddGTP 10 mM	1000 µl (10 µmol)
1910-020T	ddTTP 10 mM	200 µl (2 µmol)
1910-025T	ddTTP 10 mM	1000 µl (10 µmol)