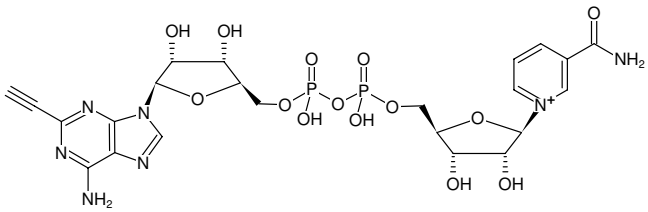
DATA SHEET

Jena Bioscience

2-Ethynyl-Adenosine-NAD$^+$

(2-EA-NAD$^+$)

Cat. No.	Amount
CLK-043	20 µl (10 mM)



Structural formula of 2-Ethynyl-Adenosine-NAD$^+$

For research use only!

Shipping: shipped on dry ice

Storage Conditions: store at -20 °C

Shelf Life: 12 months after date of delivery

Molecular Formula: $C_{23}H_{28}N_7O_{14}P_2$ (cation)

Molecular Weight: 688.46 g/mol (cation)

Exact Mass: 688.12 g/mol (cation)

Form: solution in water

Color: colorless to slightly yellow

Concentration: 10 mM - 11 mM

Applications:
in vitro ADP-Ribosylation of proteins[1](compound 1)

The resulting alkyne-functionalized protein[1,2] can subsequently be processed via Cu(I)-catalyzed (azide-alkyne) click chemistry that offers the choice

- to introduce a Biotin group for subsequent purification tasks (via Azides of Biotin)
- to introduce fluorescent group for subsequent microscopic imaging (via Azides of fluorescent dyes)

Presolski *et al.*[3] and Hong *et al.*[4] provide a general protocol for Cu(I)-catalyzed click chemistry reactions and Lin *et al.*[2] for ADP-Ribosylation assays that may be used as a starting point for the set up and optimization of individual assays.

Related Products:
Copper (II)-Sulphate ($CuSO_4$), #CLK-MI004
Tris(3-hydroxypropyltriazolylmethyl)amine (THPTA), #CLK-1010
Sodium Ascorbate (Na-Ascorbate), #CLK-MI005

Selected References:
[1] Wang *et al.* (2014) Chain-Terminating and Clickable NAD+ analogues for labeling the target proteins of ADP-Ribosyltransferases. *Angew. Chem. Int. Ed.* **53**:8159.
[2] Lin *et al.* (2012) Labeling substrate proteins of Poly (ADP-ribose) polymerase with Clickable NAD analog. *Curr. Prot. in Chem. Biol.* **4**:19.
[3] Presolski *et al.* (2011) Copper-Catalyzed Azide-Alkyne Click Chemistry for Bioconjugation. *Current Protocols in Chemical Biology* **3**:153.
[4] Hong *et al.* (2011) Analysis and Optimization of Copper-Catalyzed Azide-Alkyne Cycloaddition for Bioconjugation. *Angew. Chem. Int. Ed.* **48**:9879.