NAD⁺, Biotin-Labeled

Product Information

Description:	Biotinylated NAD ⁺ (6-biotin-17-nicotinamide-adenine-dinucleotide, 6-biotin-17-NAD).
Background:	PAR homeostasis is regulated by the family of PAR polymerases (PARPs) and PARG (Poly (ADP-ribose) glycohydrolase) in response to cellular stress conditions. ADP ribosylation, which is the addition of an ADP-ribose to a protein, is a reversible post-translational modification of proteins mostly involved in the DNA Damage Response (DDR) pathway. Poly-ADP-ribosylation (termed PARylation) is the addition of linear or branched chains of ADP-ribose. PARP and PARG activity are linked to cellular responses in inflammation, ischemia, stroke, and cancer. PARP inhibitors have been used in cancer treatment with success, leading to synthetic lethality when homologous recombination repair (HRR) is already defective. Further studies of PARP will elucidate how the levels of PARylated proteins contribute to disease and can be modulated to provide therapeutic benefit.
Supplied As:	250 μM aqueous solution
Molecular Formula:	$C_{45}H_{67}N_{12}O_{18}P_2S$
MW:	1158.1
Label:	This protein is enzymatically biotinylated.
Stability:	At least 1 year at -80°C.
Storage:	-80°C
Instructions for Use:	Thaw on ice and gently mix prior to use. Perform a quick spin before opening. Aliquot into small volumes and flash freeze for long term storage. Avoid multiple freeze/thaw cycles.
Assay Conditions:	Assay was done according to PARP1 Chemiluminescent Assay Kit (BPS Bioscience #80551) using NAD ⁺ , Biotin-Labeled instead of PARP Substrate Mixture 1.
Applications:	Non-radiolabeled substrate useful for measuring the activity of poly (ADP-ribose) polymerase (PARP) or to purify ADP-ribosylated enzymes.

Quality Control Data

