

Datasheet for ABIN925018 **PARP1 Protein**



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Overview

Quantity:	20 µg
Target:	PARP1
Origin:	Human
Source:	Insect cells (Sf9)
Protein Type:	Recombinant

Product Details

Characteristics:	~1,018 U/mg protein. One unit synthesizes 1 nmole of poly(ADP-ribose) per min. at 25°C, pH 7.5.
Purification:	Affinity purified
Purity:	> 99 % as determined by SDS-PAGE.

Target Details

Target:	PARP1
Alternative Name:	PARP-1 (PARP1 Products)
Background:	The cDNA encoding human poly(ADP-ribose) polymerase (PARP) was cloned by several groups simultaneously. With the discovery of new members (homologs) of the PARP family, PARP is referred to as PARP-1. An isolated cDNA from mouse and human encoded a protein with considerable homology to the catalytic domain of PARP-1. This protein, termed PARP-2, is a 64 kDa protein that contains a nuclear localization signal (NLS) and is activated by DNA breaks, although its DNA- binding domain is very different from that of PARP-1. Evidence has accumulated that PARP plays a role in DNA repair and a substantial effort has been invested to

Target Details

elucidate the physiological function of the PARP pathway in cellular recovery from DNA damage. PARP has been found in the base excision repair (BER) complex with DNA polymerase-, ligase III and x-ray repair cross-complementing 1 (XRCC1). PARP- 1 and PARP-2, even though lacking the zinc- finger domains, bind to single and double strand breaks during oxidative stress. In general, it appears that an early enzymatic activation of PARP occurs upon DNA-strand break formation. Binding of PARP to a DNA nick may then cause a transient halt to cellular activity and protect the DNA from sister chromatid associated proteins such as histones. Nicotinamide is cleaved in this step from the substrate NAD⁺ by PARP and the so synthesized poly(ADP)-ribose (PAR) is then used to generate ATP.

Pathways: [Apoptosis](#), [Caspase Cascade in Apoptosis](#), [DNA Damage Repair](#), [Production of Molecular Mediator of Immune Response](#), [Maintenance of Protein Location](#)

Application Details

Restrictions: For Research Use only

Handling

Format: Liquid

Buffer: 20 µg at 1 mg/mL affinity-purified liquid human recombinant PARP-1 in 100 mM Tris-HCl (pH 7.5) containing 14 mM -mercaptoethanol, 0.5 mM EDTA, 0.5 mM PMSF and 10% glycerol.

Storage: -80 °C