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Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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PRODUCT INFORMATION

PARP2 (human, recombinant)

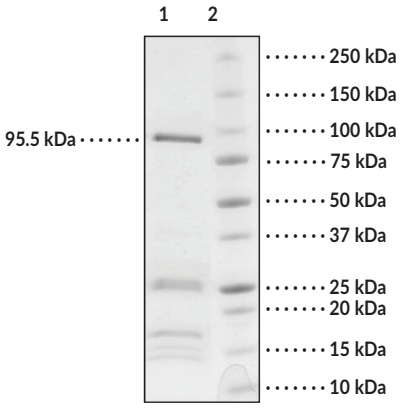
Item No. 32562

Overview and Properties

Synonyms:	ADPRT, ADPRT2, ADPRTL2, ARTD2, Poly (ADP-ribose) Polymerase 2, Poly(ADP-ribosyl)transferase 2
Source:	Active recombinant human N-terminal GST-tagged PARP2 expressed in insect cells
Amino Acids:	2-583 (full length)
Uniprot No.:	Q9UGN5
Molecular Weight:	95.5 kDa
Storage:	-80°C (as supplied)
Stability:	≥6 months
Purity:	***batch specific*** (≥50% estimated by SDS-PAGE)
Supplied in:	40 mM Tris-HCl, pH 8.0, with 110 mM sodium chloride, 2.2 mM potassium chloride, 16 mM glutathione, 20% glycerol, and 3 mM DTT
Protein Concentration:	***batch specific*** mg/ml
Activity:	***batch specific*** U/ml
Specific Activity:	***batch specific*** U/mg
Unit Definition:	One unit of PARP incorporates 100 pmol of poly(ADP) in 1 minute from NAD into the acid-insoluble form

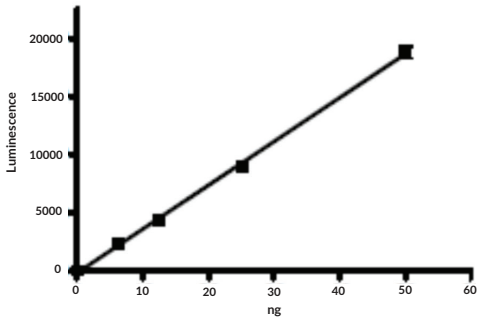
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Images



Lane 1: PARP2
Lane 2: MW Markers

SDS-PAGE Analysis of PARP2. This protein has a calculated molecular weight of 95.5 kDa.



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PRODUCT INFORMATION

Description

Poly(ADP-Ribose) polymerase 2 (PARP2) is an ADP-ribosylating enzyme with a role in the DNA damage response (DRR).[1,2] It is composed of a natively disordered N-terminal region containing a nuclear localization sequence, a central Trp-Gly-Arg (WGR) domain that is essential to DNA damage-dependent catalytic domain activity, and a C-terminal catalytic domain (CAT) that contains an ADP-ribosyltransferase fold and a regulatory helical subdomain.[2] PARP2 is ubiquitously expressed and localized to the nucleus where it is preferentially activated by the presence of PARP1-induced poly(ADP)-ribosylation (PARylation) induced by PARP1 (Item No. 32561) at sites of single-stranded DNA breaks. The WGR domain binds directly to DNA and activates PAR catalytic activity and branched PAR chain synthesis through cross-talk with the helical subdomain.[1,2] PARP2 PARylates itself and other proteins, including transcription factors, influencing multiple biological processes, such as transcription, genome maintenance, and cell signaling.[3] *PARP2* expression is negatively correlated with the amount of tumor immune infiltrate in tumor samples isolated from patients with osteosarcoma.[4] Cayman's PARP2 (human, recombinant) protein can be used for enzyme assay applications. This protein consists of 582 amino acids and has a calculated molecular weight of 92 kDa.

References

1. Chen, Q., Kassab, M.A., Dantzer, F., *et al.* PARP2 mediates branched poly ADP-ribosylation in response to DNA damage. *Nat. Commun.* **9(1)**, 3233 (2018).
2. Riccio, A.A., Cingolani, G. and Pascal, J.M. PARP-2 domain requirements for DNA damage-dependent activation and localization to sites of DNA damage. *Nucleic Acids Res.* **44(4)**, 1691-1702 (2016).
3. Ali, S.O., Khan, F.A., Galindo-Campos, M.A., *et al.* Understanding specific functions of PARP-2: New lessons for cancer therapy. *Am. J. Cancer Res.* **6(9)**, 1842-1863 (2016).
4. Wu, C.-C., Beird, H.C., Livingston, J.A., *et al.* Immuno-genomic landscape of osteosarcoma. *Nat. Commun.* **11(1)**, 1008 (2020).

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