

PRDX 2, 1-198 aa, Human, Recombinant, *E.coli*

Cat. No. IBATGP0268

Full name: Peroxiredoxin 2

NCBI Accession No.: NP_005800

Synonyms: NKEFB, PRP, PRX2, PRXII, TDPX1, TSA, PRDX2

Description: Peroxiredoxin 2, also known as PRDX2, is a member of the peroxiredoxin family of antioxidant enzymes, which reduce hydrogen peroxide and alkyl hydroperoxides. Peroxiredoxin 2 may play an antioxidant protective role in cells, and may contribute to the antiviral activity of CD8(+) T-cells. If Peroxiredoxin 2 protection is inadequate against peroxidases, the resulting protein and DNA damage may result in neurological disease such as Alzheimer's or DNA damage leading to cancer. Recombinant human Peroxiredoxin 2 protein was expressed in *E.coli* and purified by using conventional chromatography..

Form: Liquid. In 20 mM Tris-HCl buffer (pH8.0) containing 10% glycerol

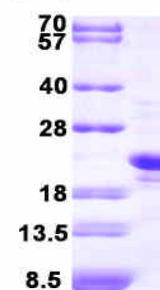
Molecular Weight: 21.8 kDa (198aa), confirmed by MALDI-TOF

Purity: > 90% by SDS - PAGE

Concentration: 1 mg/ml (determined by Bradford assay)

Biological activity: Specific activity: approximately 200-230 pmole/min/μg. Enzymatic activity was confirmed by measuring the remaining peroxide after incubation of PRDX2 and peroxide for 20 min at room temperature. Specific activity is defined as the amount of hydroperoxide that 1ug of enzyme can reduce at 25 C for 1 minute.

(KDa)



15% SDS-PAGE (3ug)

Activity Assay

1. Prepare a 50ul reaction mix into a suitable container :
The final concentrations are 1mM DTT, 0.03X PBS, 0.5% glycerol.
2. Add 5 ul of recombinant PRDX2 solution with various concentrations (0.25ug, 0.5ug) in 45 ul reaction buffer.
3. Incubate at 25C for 2 minutes.
4. Add 5ul of 5 mM H₂O₂ as a substrate and incubate the mixture for 20 min.
5. Add 20ul of 26 % trichloroacetic acid (TCA) to stop the reaction.
6. Add 30ul of Formation solution (10mM Ferrous ammonium sulfate (Fe(II)(NH₄)₂(SO₄)₂), 2.5M KSCN)
7. Record the increase in A475nm.

Sequences of amino acids:

MASGNARIGK PAPDFKATAV VDGAFKEVKL SDYKGGYVVL FFYPLDFTFV CPTETIAFSN RAEDFRKLGK EVLGVSVDSQ FTHLAWINTP
RKEGGLGPLN IPLLADVTRR LSEIDYGLVLT DEGIAYRGLF IIDGKGVLRQ ITVNDLPVGR SVDEALRLVQ AFQYTDEHGE VCPAGWKPGS
DTIKPNVDDS KEYFSKHN

General references:

- Kim K., *et al.* (2009), *Oncol Rep*, **21**(6):1391-6.
Kim JH., *et al.* (2008). *Clin Cancer Res*. **14**(8):2326-33.

Storage: Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.

For research use only. This product is not intended or approved for human, diagnostics or veterinary use.



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