

Product Specification Sheet

Human DNA Polymerase Epsilon (ε) Antibodies

Cat # DNPE12-M, **Mouse Monoclonal Anti-Human DNA Polymerase ε antibody #** 1 **SIZE:** 100 ug

Reactive oxygen species (H₂O₂^{*}, OH^{*}, O₂, HOCL) generated during normal cellular activities or by ionizing radiation and by many oxidizing/alkylating agents can induce a wide variety of lesions in DNA ranging from oxidized bases (8-oxoguanine and thymine glycol), base loss and DNA strand breaks with modified ends such as 3'-phosphate and 3'-phosphoglycolate. Unrepaired damaged/modified DNA has been implicated in aging and cancer. DNA Pol ε is expressed in proliferating cells. It is implicated in repair of UV-damaged DNA. **DNA Pol ε** is a protein of >200 kDa protein complex. The 140-KDa fragment, DNA Pol ε* is a truncated form of DNA Pol ε that is missing the C-terminal fragment.

Source of Antigen and Antibodies

Antigen	Purified Human recombinant DNA Pol ε (1-176 aa)
Ab Host/type	Purified Human recombinant DNA Pol ε (1-176 aa) was used to immunize Balb/c mouse . Splenocytes were fused with p3-X63-Ag8.653 cells. Resulting clone (DNPE12; IgG1 kappa), selected for reactivity with DNA Pol ε, was expanded into mice as ascites. Antibody has been purified by Protein A/G column chromatography.
2-Ab	Goat Anti-mouse IgG-HRP conjugate Cat # 40320 (AP, biotin, FITC conjugates also available)
-ve control IgG	Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

Form & Storage

Affinity pure IgG

100 ug/100ul
solution lyophilized powder
Buffer: 100 mM Tris, pH 7.5, 0.2% BSA
contains 0.05% sodium azide
Reconstitute powder 100 ul PBS

Storage

Short-term: unopened, undiluted vials for less than a week at 4oC.

Long-term: at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20oC or below.

Shipping: 4oC for solutions and room temp for powder.

Recommended Usage

Western Blotting: An initial concentration. of 1-5 ug/ml is recommended for Western. Users must optimize antibody dilution depending upon the nature of samples and other technical conditions. The antibody recognizes >200 kDa DNA Pol ε, and 140 kDa Pol ε* from HeLa and other cells and tissues.

ELISA (1:10-50K; using 50-100 ng control antigen/well).

Histochemistry & Immunofluorescence: Not tested. An initial concn. 2-20 ug/ml is recommended for IHC.

Others: This antibody does not inhibit the activity of the DNA Pol ε.

Specificity & Cross-reactivity

DNPE12-M crossreact with mouse, monkey, and cow. It is specific for DNA Pol ε and Pol ε*. No crossreactivity is seen with DNA Pol α or δ. Antibody cross-reactivity in various other species has not been studied.

General References:

Uitto L et al (1995) Nucl. Acid Res. 23, 244-247; Tuusa j et al (1995) Nucl. Acid Res. 23, 2178-2183; Zlotkin T et al (1996) EMBO J. 15, 2298-2305; Wood Rd et al (1997) carcinogenesis 18, 605-610; Prapura DR et al (1997) J Develop. Neurosci. 15, 67-73; Chui G et al (1995) J. Biol. Chem. 270, 691-698; Chui GS and Linn S (1995) Methods Enzymol. 262; 93-98

***This product is for In vitro research use only.**

Material Safety Data. Unless specified otherwise, the material contains negligible amounts of sodium azide (0.1%) as preservative. Appropriate care should be exercised when handling and disposing this material.

Related material available from ADI

Antibodies to MGMT, hNTH, Ape, mutY, OGG1, XRCC1, DNA Ligase, Polymerase, XPG, ORC1 etc are available.

Anti-Rabbit IgG-HRP Conjugate and ECL Reagents

Western Blot Recycling Kit (Strips blots in 5 minutes) and re-use the same blot with multiple antibodies

DNPE12-M

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Alpha Diagnostic Intl Inc., 6203 Woodlake Center Dr, S an Antonio, T X 7 8 24 4 , U S A ;

India Contact:

Life Technologies (India) Pvt. Ltd.

306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi – 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400 Fax: +91-11-42208444 Email: customerservice@lifetechindia.com Website: www.lifetechindia.com