ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

DNA Ligase 1 (DNL1) Antibodies

Cat # DNAL11-M, Mouse Monoclonal Anti-Bovine DNA Ligase-1 IgG # 1 **SIZE**: 100 ug

Eukaryotic DNA ligases are ATP-dependent enzymes that catalyze the joining of single and double stranded DNA breaks, which is an essential step in DNA repair, replication and recombination. There are at least 4 DNA ligases, termed DNA ligase I-IV, have been cloned and characterized. DNA ligase-I is functionally homologous to the DNA ligase encoded by the S. cervisiae CDC9 gene. The joining of Okazaki fragments during lagging strand DNA replication is due to DNA ligase-I. DNA ligase-I (919 aa, chromosome 19q13.2-q13.3; mouse 916 aa, rat 919 aa) is a nuclear protein. Its deficiency causes immunodeficiency and cellular hypersensitivity of DNA-damaging agents.

Source of Antigen and Antibodies

Antigen	Purified **bovine** DNA ligase-I protein
Ab Host/type	Purified **bovine** DNA ligase-I protein was used to immunize Balb/c **mouse**. Splenocytes were fused with Sp2/0 myeloma cells. Resulting clone (designated DNAL11, isotype IgG1), selected for reactivity with DNA ligase-I, 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 50 ug/50 ul lyophilized powder

Buffer: 100 mM Tris, pH 7.5, 0.2% BSA
contains 0.05% sodium azide
Reconstitute powder in the original vol. of water

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 concn. 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 has detected ~125 kDa band 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.

Specificity & Cross-reactivity

Anti-bovine DNA Ligase-I antibody crossreact with human and cow. Antibody cross-reactivity in various other species has not been studied.

General References:

Barnes DE et al (1990) PNAS 87, 6679-6683; Petrini JH et al (1991) PNAS 88, 7615-7619; Barnes DE et al (1992) Cell 69, 495-503; Savinvi E et al (1994) Gene 144, 253-257;

***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

DNAL11-M 71205A