

Product Specification Sheet

**Human Deoxyribonuclease II (Dnase II) Antibodies and controls**

<b>Cat # DNASE23-P</b>	Human DNase II Control peptide # 1	<b>SIZE:</b> 100 ug
<b>Cat # DNASE23-C</b>	Human DNase II protein WB positive control	<b>SIZE:</b> 100 ul

**Deoxyribonuclease II (Dnase II, EC.3.1.22.1)** is one of the two Dnase present in mammalian tissues and biological fluids. Dnase II hydrolyzes DNA to 3'-phosphoryl oligonucleotides under acidic conditions. Dnase II is also known as "acid Dnase". It has preference of for dsDNA. Dnase II has been implicated in internucleosomal cleavage of chromatin to generate DNA fragments or ladder, a hallmark of apoptosis. Dnase II (mouse 353-aa; human 360-aa, chromosome 19p13.2-q13.4) is a lysosomal enzyme present in most tissues. Dnase II is synthesized as a pro-enzyme (signal peptide 1-16 aa, propeptide region of 91-aa, and 253-aa mature protein (110-353 aa) and processed to produce active enzyme containing 2-chains of ~32 and 12 kDa. Dnase II has no significant sequence homology with Dnase I.

**Source of Antigen and Antibodies**

<b>Antigen</b>	A peptide (designated <b>DNASE23-P</b> , control/blocking peptide) near the C-terminus of human Dnase II (1) was synthesized, coupled to KLH
<b>Ab Host/type</b>	Rabbit, Polyclonal IgG purified over antigen-agarose (Cat # <b>DNASE23-A</b> )
<b>2-Ab</b>	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
<b>-ve control IgG</b>	Cat # 20009-1, Rabbit (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

Human spleen tissues protein lysate is rested with anti-DNase2 antibodies. For Western blot +ve control (**Cat # DNASE23-C**) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of **DNASE23-C** for good visibility with antibody Cat # **DNASE23-S**. Store at -20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the **DNASE23-C** solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly

**Form & Storage of Antibodies/Peptide Control**

**Affinity pure IgG**  
100 ug/100ul solution lyophilized powder  
Supplied in **Buffer:** PBS+0.1% BSA  
**Reconstitute powder** in PBS at 1mg/ml

**Storage**

**Short-term:** unopened, undiluted liquid vials at -20oC and powder at 4oC or -20oC..

**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 blot: 1-5 ug/ml using human spleen tissue or other cells or tissues expressing DNase1 protein. ~40 Kda.

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

**Histochemistry & Immunofluorescence:** 2-10 ug/ml using paraformaldehyde fixed tissues.

**Specificity & Cross-reactivity**

The DNASE23-P peptide sequence is not well conserved in mouse Dnase II. We recommend the use of DNASE22-A for the study of mouse Dnase II. DNASE23-P has no significant sequence homology with other lysosomal enzymes. Control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (detailed protocol is available at the web site).

**General References:** (1) Yasuda T et al (1998) JBC 273, 2610-2616; Barker KP et al (1998) Gene 215, 281-289; Shilokawa D et al (1998) BBRC 247, 864-869; Yasuda T et al (1998) Ann. Hum. Genet. 62, 299-305;

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

**Related material available from ADI**

Antibodies to MGMT, hNTH, DNase, APE 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

DNASE23-A-C 71205A

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