

**Human HE2 Subunit Antibodies**

Cat. # HE21-P	<b>Human HE2</b> control/ blocking peptide # 1	<b>SIZE:</b> 100 ug
Cat. #HE21-A	<b>Rabbit</b> Anti-Human HE2 1 IgG # 1 (aff pure)	<b>SIZE:</b> 100 ug

**HE2** is a human epididymis specific sperm binding secretory protein expressed by SPAG11 gene (chromosome 8p23-p22), a 103aa protein adopts a typical antigenic pattern with a subacrosomal equatorial distribution on the sperm head, this localization of HE2 with Beta-defensins in the epithelial defense system of epididymal duct have developed mechanism to fight ascending infections, including local production of these antimicrobial peptides and proteins. The regionalized epididymal expression of the HE2 and its isoforms suggests that they exert their effects at different times in the controlled sequence of sperm modification, maturation, binding and a direct role in fertilization.

HE2 represents 3 major isoforms, HE2-alpha, HE2-beta and HE2-gamma, all variants have a common 71 residue N terminus but various C termini, these variations at C termini is due to frame shifting deletions. Thus, identical sequences and deletion, start and stop points indicate that HE2 isoforms are derived from alternative splicing of 8 or more exons of a single gene and working towards common microbial defense and sperm maturation to acquire fertilizing ability. The human HE2 protein and its isoforms are 28% conserved

**Source of Antigen and Antibodies:**

<b>Antigen</b>	14aa peptide from Human HE2 <b>(Designated HE21-P or control peptide)</b> conjugated to KLH epitope location ~ Mid-region, Intracellular domain
<b>Antibody host/type</b>	Rabbit, Polyclonal IgG (Cat# <b>HE21-A</b> ), purified over antigen-Agarose
<b>Secondary Ab</b>	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
<b>Negative Control Ab</b>	Non-immune rabbit IgG (Cat # 20009-1) to be used as -ve control for ELISA, WB, IHC etc.

**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

**Control/blocking peptide**

100 ug/100 ul solution lyophilized powder  
Supplied in Buffer: PBS pH 7.5,  
**Reconstitute powder in PBS at 1 mg/ml.**

**Storage**

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

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

**Stability:** 6-12 months at -20°C or below.

**Shipping:** 4°C for solutions and room temp for powder

**Recommended Usage**

**Western Blotting** (1:1K-5K for neat serum and 1-10 ug/ml for affinity pure using Chemiluminescence technique.

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

**Histochemistry & Immunofluorescence.** We recommend the use of affinity purified antibody at 10-30 ug/ml in formaldehyde fixed, paraffin-embedded tissues.

**Specificity & Cross-reactivity**

The human HE2 control peptide is 100% conserved in all  $\alpha$ ,  $\beta$ , and  $\gamma$  isoforms, with no significant homology detected in other species. Antibody cross-reactivity in various species has not been studied. 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 (see detailed protocol at the web site).

**General References:**

(1) Hans Henning von Horsten et al (2002) Biol of reproduction 67, 804-813; Peng Li et al (2001) Science 291, 1783-1785; Katherine G Hamil et al (2000) Endocrinology 141, 1245-1253.

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

**Related material available from ADI**

Antibodies and Peptides: HE2( $\alpha$ ,  $\beta$ , and  $\gamma$  isoforms).

BIN 1B antibodies

HE21-A-P 71217J