ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Apobec-1 Antibodies

Cat. # APOBEC11-P	Human Apobec-1 control peptide # 1	**SIZE**: 100 ug
Cat. # APOBEC11-A	**Rabbit** Anti-Human Apobec-1 IgG # 1 (aff pure)	**SIZE**: 100 ug

RNA editing is an important mechanism for regulating genetic plasticity through the generation of alternative protein products from a single structural gene. Substitutional RNA editing employs a variety of genetic mechanisms, the biochemical basis of which has been elucidated following the development of *in vitro* assays that recapitulate important elements of this process. There are two types of substitutional RNA exist in mammals, namely A-to-I and C-to-U RNA editing. The best-characterized example of C-to-U RNA editing involves the nuclear transcript encoding intestinal apolipoprotein B (apo B)). Apo B RNA editing changes a CAA to a UAA stop codon, generating a truncated protein, apoB48. The functional complex includes a minimal core composed of apobec-1 and ACF, that function as an adaptor protein by binding both the deaminase and the RNA substrate. The RNA binding proteins also include CUGBP2 which along with Apobec-1 binds to the consensus binding sequence UUUN (A/U) U, present in c-myc, VEGF and Cyclooxygenase-2 (COX2).

Apobec-1, a 236aa protein in human (chr 12p13.1) an RNA specific cytidine deaminase, is essential but not efficient for apo B editing activity, there being a requirement for other protein factor. Apobec-1 is a dimer with the composite active site assembled through interaction of each monomer; In addition it is an RNA-binding protein that binds to the consensus sequence UUUN (A/U) U located within the terminal loop of apo B RNA. But finally it forms the minimal component of the core-editing enzyme along with ACF.

SUBUNIT: Homodimer. Part of the apolipoprotein B mRNA editing complex with APC. Found in a complex with CUGBP2 and ACF. APC binds to APOB mRNA and is probably responsible for docking APOBEC1 to the mRNA. Interacts with HNRPAB and SYNCRIP. TISSUE SPECIFICITY: Expressed exclusively in the small intestine. SIMILARITY: Belongs to the cytidine and deoxycytidylate deaminase family.

Source of Antigen and Antibodies

Antigen	16-aa peptide from Human **Apobec-1** (gene accession # P41238, refs 1); **Designation (APOBEC11-P, control peptide**) conjugated to KLH
Location	~C-terminus
Ab Host/type	Rabbit, Polyclonal Aff pure IgG (**cat # APOBEC11-A**)
2-ab	**Goat Anti-rabbit IgG-HRP** cat # 20320 (AP, biotin, FITC conjugates also available)
-ve control IgG	**# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control**

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 -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 Blotting (1-10 ug/ml for affinity pure antibody using ECL technique).

ELISA: Control peptide can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (0.5-1 ug/ml for affinity pure).

Histochemistry & Immunofluorescence: Not tested. We recommend the use of aff pure IgG at 2-20 ug/ml.

Specificity & Cross-reactivity

Human APOBEC11-P control peptide is 100% conserved in chimp, 93% in pongo pygmaeus, and 75% in rabbit. The eptioep is only partly (~50%) contained in mouse and rat APOBEC1. APOBEC-1. 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 (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (see detailed protocol at: www.4adi.com\data\abblock.html).

General References: Shrikant Anant et al (2001) JBC, Vol. 276, No: 50, 47338-47351; Duanxiang Li et al (2001) Genomics 74, 396-401; Ba-Bie Teng et al (1999) J. of Lipid Research, Vol. 40, 623-633; Lu X et al (1999) Hum. Mol. Genet. 8 (1), 53-60; Fujino, T. et al (1998) Genomics 47 (2), 266-275.

*This product is for In vitro research use only.

Related material available from ADI

Antibodies for CUGBP2, Apobec-1, ACF, VEGF, COX1, COX2, COX3 etc..

Apobec11-A-P 70807A

Alpha Diagnostic Intl Inc., 6203 Woodlake Center Dr, San Antonio, TX 78244, USA; **Email**: service@4adi.com
☎ (800) 786-5777; (210) 561-9515; **Fax**: (210) 561-9544; **Web Site**: www.4adi.com