

# RNF40 Rabbit pAb

RNF40 Rabbit pAb Catalog # AP59168

#### **Product Information**

**Application** IHC-P, IHC-F, IF

Primary Accession <u>075150</u>

**Reactivity** Pig, Mouse, Dog

Host Rabbit
Clonality Polyclonal
Calculated MW 113678
Physical State Liquid

Immunogen KLH conjugated synthetic peptide derived from human RNF40

Epitope Specificity 901-1001/1001

**Isotype** IgG

**Purity** affinity purified by Protein A

**Buffer** 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.

SUBCELLULAR LOCATION Nucleus

**SIMILARITY** Belongs to the BRE1 family.Contains 1 RING-type zinc finger.

**SUBUNIT** Homodimer. Component of the RNF20/40 complex at least composed of 2 copies of RNF20/BRE1A, 2 copies of RNF40/BRE1B and UBE2E1/UBCH6.

Interacts with RB1 and WAC.

**Important Note** This product as supplied is intended for research use only, not for use in

human, therapeutic or diagnostic applications.

**Background Descriptions** Ubiquitination is an important mechanism through which three classes of

enzymes act in concert to target short-lived or abnormal proteins for destruction. The three classes of enzymes involved in ubiquitination are the ubiquitin-activating enzymes (E1s), the ubiquitin-conjugating enzymes (E2s) and the ubiquitin-protein ligases (E3s). RNF40 (RING finger protein 40), also known as BRE1B, Staring or RBP95, is a 1,001 amino acid nuclear protein that contains one RING-type zinc finger. Expressed ubiquitously with highest expression in heart, testis and paperess. RNF40 functions as an E3

expression in heart, testis and pancreas, RNF40 functions as an E3 ubiquitin-protein ligase that regulates the monoubiquitination and

subsequent degradation of select residues on target proteins, such as Histone H2B and Syntaxin 1. In addition, RNF40 forms a ubiquitin ligase complex with UBCH6 (an E2 enzyme) and together, these proteins play a crucial role in regulation of the histone code. Four isoforms of RNF40 exist due to

alternative splicing events.

#### **Additional Information**

**Gene ID** 9810

Other Names E3 ubiquitin-protein ligase BRE1B, BRE1-B, 2.3.2.27, 95 kDa

retinoblastoma-associated protein, RBP95, RING finger protein 40, RING-type

E3 ubiquitin transferase BRE1B, RNF40, BRE1B, KIAA0661

**Target/Specificity** Ubiquitously expressed. Expressed at higher level in testis, heart and

pancreas, while it is only weakly expressed in lung, skeletal muscle and small

intestine.

**Dilution** IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500

**Storage** Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When

reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody

is stable for at least two weeks at 2-4 °C.

#### **Protein Information**

Name RNF40

Synonyms BRE1B, KIAA0661

**Function** Component of the RNF20/40 E3 ubiquitin-protein ligase complex that

mediates monoubiquitination of 'Lys-120' of histone H2B (H2BK120ub1). H2BK120ub1 gives a specific tag for epigenetic transcriptional activation and is also prerequisite for histone H3 'Lys-4' and 'Lys-79' methylation (H3K4me and H3K79me, respectively). It thereby plays a central role in histone code and gene regulation. The RNF20/40 complex forms a H2B ubiquitin ligase complex in cooperation with the E2 enzyme UBE2A or UBE2B; reports about

the cooperation with UBE2E1/UBCH are contradictory. Required for

transcriptional activation of Hox genes.

Cellular Location Nucleus.

**Tissue Location** Ubiquitously expressed. Expressed at higher level in testis, heart and

pancreas, while it is only weakly expressed in lung, skeletal muscle and small

intestine

## **Background**

Ubiquitination is an important mechanism through which three classes of enzymes act in concert to target short-lived or abnormal proteins for destruction. The three classes of enzymes involved in ubiquitination are the ubiquitin-activating enzymes (E1s), the ubiquitin-conjugating enzymes (E2s) and the ubiquitin-protein ligases (E3s). RNF40 (RING finger protein 40), also known as BRE1B, Staring or RBP95, is a 1,001 amino acid nuclear protein that contains one RING-type zinc finger. Expressed ubiquitously with highest expression in heart, testis and pancreas, RNF40 functions as an E3 ubiquitin-protein ligase that regulates the monoubiquitination and subsequent degradation of select residues on target proteins, such as Histone H2B and Syntaxin 1. In addition, RNF40 forms a ubiquitin ligase complex with UBCH6 (an E2 enzyme) and together, these proteins play a crucial role in regulation of the histone code. Four isoforms of RNF40 exist due to alternative splicing events.

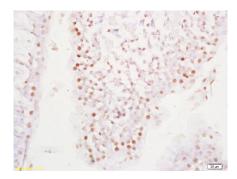
### **Images**

Tissue/cell: rat testis tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer ( 0.01M, pH 6.0 ), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal

goat serum,C-0005) at 37°C for 20 min; Incubation: Anti-RNF40 Polyclonal Antibody,

Unconjugated(AP59168) 1:200, overnight at 4°C, followed



by conjugation to the secondary antibody (SP-0023) and  $\ensuremath{\mathsf{DAB}}(\ensuremath{\mathsf{C}}\xspace\text{-}0010)$  staining

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.