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# RNF40 Rabbit pAb

RNF40 Rabbit pAb
Catalog # AP59168

## Product Information

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| **Application** | IHC-P, IHC-F, IF |
| **Primary Accession** | O75150 |
| **Reactivity** | Rat |
| **Predicted** | Human, Mouse, Dog, Pig, Horse |
| **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 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

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| **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 |

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| | 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

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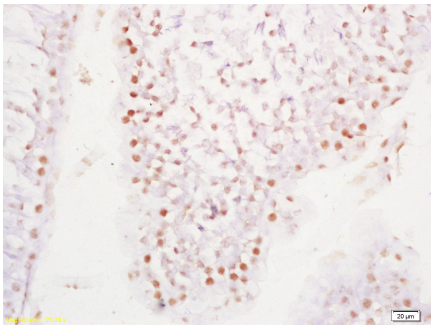
| **Name** | RNF40 |
| **Synonyms** | BRE1B, KIAA0661 |
| **Function** | Component of the RNF20/40 E3 ubiquitin-protein ligase complex that mediates monoubiquitination of 'Lys-120' of histone H2B (H2BK120ub1). H2BK120ub1 gives a specific tag for epigenetic transcriptional activation and is also prerequisite 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℃ 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 DAB(C-0010) staining