Recombinant RNF40 Monoclonal Antibody

catalog number: **AN302055L**

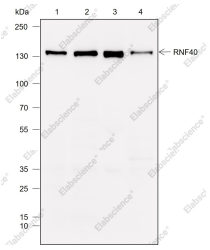
Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

Description

Reactivity	Human
Immunogen	Peptide. This information is proprietary to PTMab
Host	Rabbit
Isotype	Rabbit IgG
Clone	C331676
Purification	Protein A affinity purification
Conjugation	Unconjugated
Buffer	PBS, 50% glycerol, 0.05% Proclin 300, 0.05% protein protectant.

Applications	Recommended Dilution
WB	1:1000

Data



Western Blot with RNF40 Monoclonal Antibody at dilution of 1:1000. Lane 1: MCF-7, Lane 2: HeLa, Lane 3: A375, Lane 4: HepG2

Observed-MW:140 kDa

Calculated-MW:114 kDa

Preparation & Storage

Storage	Store at -20°C Valid for 12 months. Avoid freeze/thaw cycles.
Shipping	Ice bag

Background

In mammalian cells, the significance of histone H2B ubiquitination in chromatin epigenetics came from the identification of the budding yeast protein Bre1. Together with the ubiquitin-conjugating enzyme Rad6, Bre1 serves as the E3 ligase in the monoubiquitination of the yeast histone H2B within transcribed regions of chromatin. Subsequently, the mammalian orthologs of yeast Bre1, RNF20 and RNF40, were identified. These two proteins form a tight heterodimer that acts as the major E3 ligase responsible for histone H2B monoubiquitination at Lys120 in mammalian cells, a modification linked to RNA Pol II-dependent transcription elongation in undamaged cells. Researchers have shown that DNA double-strand breaks (DSBs) are also capable of inducing monoubiquitination of H2B. This process depends upon the recruitment to DSB sites, as well as ATM-dependent phosphorylation of the RNF20-RNF40 heterodimer, thus highlighting a role for this E3 ligase in DSB repair pathways. Indeed, investigators have shown that loss of RNF20-RNF40 function promotes replication stress and chromosomal instability, which may constitute an early step in malignant transformation that precedes cell invasion.

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