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RNF20 Antibody

Catalog # ASC11659

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q5VTR2
Other Accession	NP_062538, 34878777
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	113662
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	RNF20 antibody can be used for detection of RNF20 by Western blot at 1 - 2 g/mL.

Additional Information

Gene ID	56254
Other Names	E3 ubiquitin-protein ligase BRE1A, BRE1-A, hBRE1, 6.3.2.-, RING finger protein 20, RNF20, BRE1A
Target/Specificity	RNF20; Multiple isoforms of RNF20 are known to exist.
Reconstitution & Storage	RNF20 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	RNF20 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RNF20
Synonyms	BRE1A
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 inb 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. Recruited to the MDM2 promoter, probably by being recruited by p53/TP53, and thereby acts as a

	transcriptional coactivator. Mediates the polyubiquitination of isoform 2 of PA2G4 in cancer cells leading to its proteasome-mediated degradation.
Cellular Location	Nucleus
Tissue Location	Expressed in the normal brain and also in malignant gliomas (at protein level).

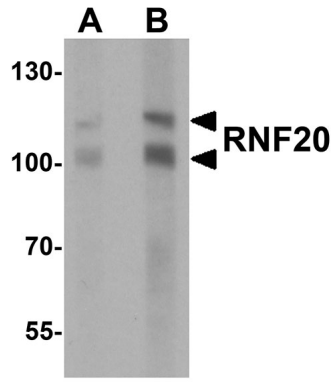
Background

RNF20 Antibody: RNF20 is an E3 ubiquitin ligase that regulates chromosome structure by monoubiquitinating histone H2B. RNF20 selectively suppresses the expression of some genes such as several protooncogenes and growth-related genes, including many genes that are induced by epidermal growth factor by interfering with chromatin recruitment of transcription elongation factor SII (TFIIS). In contrast, RNF20 also positively regulates the p53 tumor suppressor as well as numerous histone H2A and H2B genes. Together with the deubiquitinase USP44, RNF20 regulates stem cell differentiation by modulating H2B monoubiquitination.

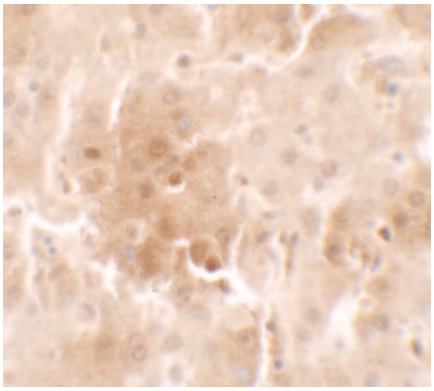
References

Zhu B, Zheng Y, Pham AD, et al. Monoubiquitination of human histone H2B: the factors involved and their roles in HOX gene regulation. Mol. Cell 2005; 20:601-11.
Shema E, Kim J, Roeder RG, et al. RNF20 inhibits TFIIS-facilitated transcriptional elongation to suppress pro-oncogenic gene expression. Mol Cell 2011; 42:477-88.
Shema E, Tirosh I, Aylon Y, et al. The histone H2B-specific ubiquitin ligase RNF20/hBRE1 acts as a putative tumor suppressor through selective regulation of gene expression. Genes Dev. 2008; 22:2664-76.
Fuchs G, Shema E, Vesterman R, et al. RNF20 and USP44 regulate stem cell differentiation by modulating H2B monoubiquitylation. Mol. Cell 2012; 46:662-73.

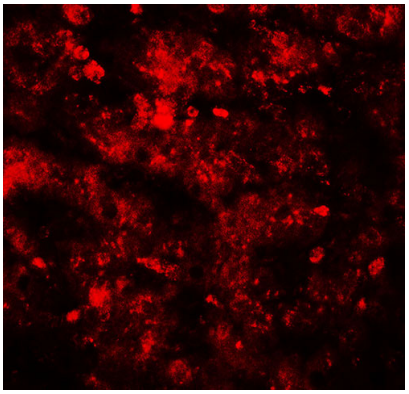
Images



Western blot analysis of RNF20 in human liver tissue lysate with RNF20 antibody at (A) 1 and (B) 2 µg/mL.



Immunohistochemistry of RNF20 in human liver tissue with RNF20 antibody at 2.5 µg/ml.



Immunofluorescence of RNF20 in human liver tissue with RNF20 antibody at 20 µg/ml.