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SUMO4 Antibody (V55 Mutant)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1264b

Specification

SUMO4 Antibody (V55 Mutant) - Product Information

Application	**WB, IHC-P,E**
Primary Accession	Q6EEV6
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**

SUMO4 Antibody (V55 Mutant) - Additional Information

Gene ID 387082

Other Names
Small ubiquitin-related modifier 4, SUMO-4, Small ubiquitin-like protein 4, SUMO4, SMT3H4

Target/Specificity
This SUMO4 antibody is generated from rabbits immunized with a KLH conjugated peptide CEPRGLS(V)KQIRFRFG selected from human SUMO4. This antibody is affinity purified using peptides CEPRGLS(V)KQIRFRFG (positive selection) and CEPRGLS(M)KQIRFRFG (negative selection).

Dilution
WB~~1:1000
IHC-P~~1:50~100
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
SUMO4 Antibody (V55 Mutant) is for research use only and not for use in diagnostic or therapeutic procedures.

SUMO4 Antibody (V55 Mutant) - Protein Information

Name SUMO4

Synonyms SMT3H4

Function Ubiquitin-like protein which can be covalently attached to target lysines as a monomer. Does not seem to be involved in protein degradation and may modulate protein subcellular localization, stability or activity. Upon oxidative stress, conjugates to various anti-oxidant enzymes, chaperones, and stress defense proteins. May also conjugate to NFKBIA, TFAP2A and FOS, negatively regulating their transcriptional activity, and to NR3C1, positively regulating its transcriptional activity. Covalent attachment to its substrates requires prior activation by the E1 complex SAE1-SAE2 and linkage to the E2 enzyme UBE2I.

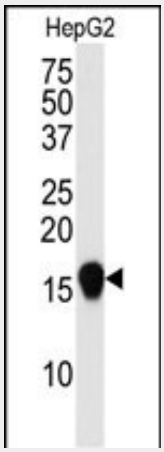
Tissue Location
Expressed mainly in adult and embryonic kidney. Expressed at various levels in immune tissues, with the highest expression in the lymph node and spleen.

SUMO4 Antibody (V55 Mutant) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

SUMO4 Antibody (V55 Mutant) - Images



Western blot analysis of SUMO4 Antibody (V55 Mutant) (Cat. #AP1264b) in HepG2 cell line lysate (35ug/lane). SUMO4 mutant (arrow) was detected using the purified Pab.

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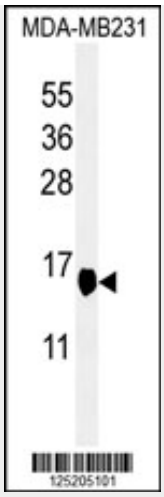
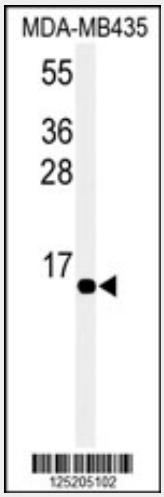
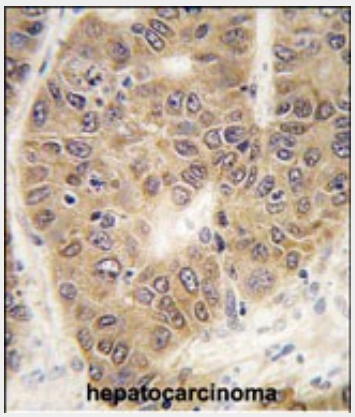


Western blot analysis of hSUMO4-M55 WT specific (RB25205) in MDA-MB231 cell line lysates (35ug/lane).SUMO4-M55 (arrow) was detected using the purified Pab.



Western blot analysis of hSUMO4-M55 WT specific (RB25205) in MDA-MB435 cell line lysates (35ug/lane).SUMO4-M55 (arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with SUMO4 antibody (V55 Mutant) (Cat.#AP1264b), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

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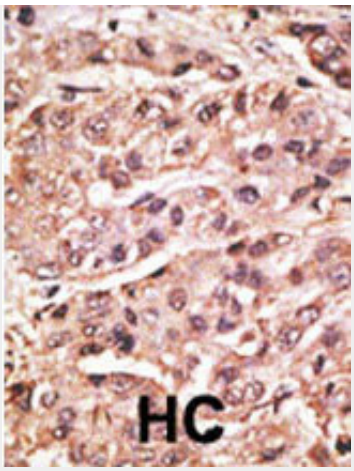

Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

SUMO4 Antibody (V55 Mutant) - Background

SUMO4 is a member of the SUMO gene family. This family of small ubiquitin-related modifiers covalently modify target lysines in proteins and control the target proteins' subcellular localization, stability, or activity. Upon oxidative stress, SUMO4 conjugates to various anti-oxidant enzymes, chaperones, and stress defense proteins. This protein may also conjugate to NFKBIA, TFAP2A and FOS, negatively regulating their transcriptional activity, and to NR3C1, positively regulating its transcriptional activity. Covalent attachment to SUMO4 substrates requires prior activation by the E1 complex SAE1-SAE2 and linkage to the E2 enzyme UBE2I. In contrast to SUMO1, SUMO2 and SUMO3, SUMO4 seems to be insensitive to sentrin-specific proteases due to the presence of Pro-90. This may impair processing to mature form and conjugation to substrates. SUMO4 is located in the cytoplasm and specifically modifies IKBA, leading to negative regulation of NF-kappa-B-dependent transcription of the IL12B gene. The M55V substitution has been associated with type I diabetes.

SUMO4 Antibody (V55 Mutant) - References

Park,Y., et al. Nat. Genet. 37 (2), 112 (2005)
Guo,D., et al. Nat. Genet. 36 (8), 837-841 (2004)
Bohren,K.M.,et al. J. Biol. Chem. 279 (26), 27233-27238 (2004)
Yang, S.H., et al., Mol. Cell 13(4):611-617 (2004).
Bailey, D., et al., J. Biol. Chem. 279(1):692-703 (2004).
Ling, Y., et al., Nucleic Acids Res. 32(2):598-610 (2004).
Pountney, D.L., et al., Exp. Neurol. 184(1):436-446 (2003).
Ohshima, T., et al., J. Biol. Chem. 278(51):50833-50842 (2003).