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SUMO4 Antibody (M55 Wild type)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1264a

Product Information

Application	WB, IHC-P, E
Primary Accession	Q6EEV6
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	10653
Antigen Region	34-63

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 synthetic peptide between 34-63 amino acids from human SUMO4.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. 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 (M55 Wild type) is for research use only and not for use in diagnostic or therapeutic procedures.

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.

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.

References

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Pountney, D.L., et al., Exp. Neurol. 184(1):436-446 (2003).
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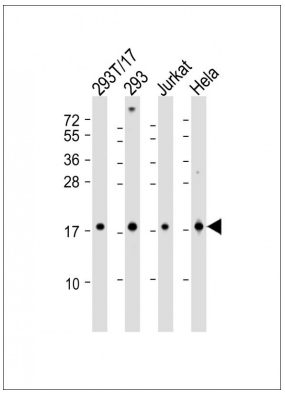
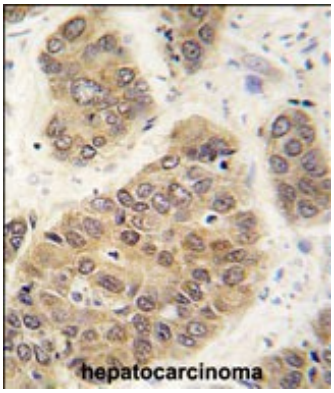
Images



All lanes : Anti-SUMO4 Antibody (M55 Wild type) at 1:2000 dilution Lane 1: 293T-17 whole cell lysate Lane 2: 293 whole cell lysate Lane 3: Jurkat whole cell lysate Lane 4: Hela whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 17 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with SUMO4 antibody (M55 Wild type) (Cat.#AP1264a), 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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