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SUMO4 Antibody (V55 Mutant) Blocking Peptide

Synthetic peptide
Catalog # BP1264b

Specification

SUMO4 Antibody (V55 Mutant) Blocking Peptide - Product Information

Primary Accession Q6EEV6

SUMO4 Antibody (V55 Mutant) Blocking Peptide - Additional Information

Gene ID 387082

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

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP1264b was selected from the V55 region of human SUMO4. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

SUMO4 Antibody (V55 Mutant) Blocking Peptide - 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) Blocking Peptide - Protocols

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

- Blocking Peptides

SUMO4 Antibody (V55 Mutant) Blocking Peptide - Images

SUMO4 Antibody (V55 Mutant) Blocking Peptide - 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) Blocking Peptide - 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).