

KAT2A Rabbit mAb

Catalog # AP75480

Product Information

Application	WB, IP
Primary Accession	Q92830
Reactivity	Human
Host	Rabbit
Clonality	Monoclonal Antibody
Calculated MW	93926

Additional Information

Gene ID	2648
Other Names	KAT2A
Dilution	WB~~1/500-1/1000 IP~~N/A
Format	50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

Name	KAT2A {ECO:0000303 PubMed:27796307, ECO:0000312 HGNC:HGNC:4201}
Function	Protein lysine acyltransferase that can act as a acetyltransferase, glutaryltransferase, succinyltransferase or malonyltransferase, depending on the context (PubMed: 29211711 , PubMed: 35995428). Acts as a histone lysine succinyltransferase: catalyzes succinylation of histone H3 on 'Lys-79' (H3K79succ), with a maximum frequency around the transcription start sites of genes (PubMed: 29211711). Succinylation of histones gives a specific tag for epigenetic transcription activation (PubMed: 29211711). Association with the 2-oxoglutarate dehydrogenase complex, which provides succinyl-CoA, is required for histone succinylation (PubMed: 29211711). In different complexes, functions either as an acetyltransferase (HAT) or as a succinyltransferase: in the SAGA and ATAC complexes, acts as a histone acetyltransferase (PubMed: 17301242 , PubMed: 19103755 , PubMed: 29211711). Has significant histone acetyltransferase activity with core histones, but not with nucleosome core particles (PubMed: 17301242 , PubMed: 19103755 , PubMed: 21131905). Has a strong preference for acetylation of H3 at 'Lys-9' (H3K9ac) (PubMed: 21131905). Also catalyzes acetylation of histone H1.4 (H1-4) at 'Lys-34' (H1.4K34ac), a modification enriched at promoters of active genes (PubMed: 22465951). Acetylation of histones gives a specific tag for

epigenetic transcription activation (PubMed:[17301242](#), PubMed:[19103755](#), PubMed:[29211711](#)). Recruited by the XPC complex at promoters, where it specifically mediates acetylation of histone variant H2A.Z.1/H2A.Z, thereby promoting expression of target genes (PubMed:[29973595](#), PubMed:[31527837](#)). Involved in long-term memory consolidation and synaptic plasticity: acts by promoting expression of a hippocampal gene expression network linked to neuroactive receptor signaling (By similarity). Acts as a positive regulator of T-cell activation: upon TCR stimulation, recruited to the IL2 promoter following interaction with NFATC2 and catalyzes acetylation of histone H3 at 'Lys-9' (H3K9ac), leading to promote IL2 expression (By similarity). Required for growth and differentiation of craniofacial cartilage and bone by regulating acetylation of histone H3 at 'Lys-9' (H3K9ac) (By similarity). Regulates embryonic stem cell (ESC) pluripotency and differentiation (By similarity). Also acetylates non-histone proteins, such as CEBPB, MRE11, PPARGC1A, PLK4 and TBX5 (PubMed:[16753578](#), PubMed:[17301242](#), PubMed:[27796307](#), PubMed:[29174768](#), PubMed:[38128537](#)). Involved in heart and limb development by mediating acetylation of TBX5, acetylation regulating nucleocytoplasmic shuttling of TBX5 (PubMed:[29174768](#)). Acts as a negative regulator of centrosome amplification by mediating acetylation of PLK4 (PubMed:[27796307](#)). Acts as a negative regulator of gluconeogenesis by mediating acetylation and subsequent inactivation of PPARGC1A (PubMed:[16753578](#), PubMed:[23142079](#)). Also acts as a histone glutaryltransferase: catalyzes glutylation of histone H4 on 'Lys-91' (H4K91glu), a mark that destabilizes nucleosomes by promoting dissociation of the H2A-H2B dimers from nucleosomes (PubMed:[31542297](#)).

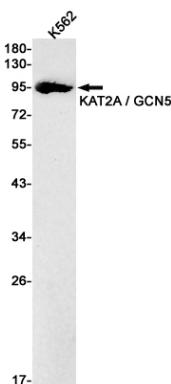
Cellular Location

Nucleus. Chromosome Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Note=Mainly localizes to the nucleus (PubMed:27796307). Localizes to sites of DNA damage (PubMed:25593309) Also localizes to centrosomes in late G1 and around the G1/S transition, coinciding with the onset of centriole formation (PubMed:27796307).

Tissue Location

Expressed in all tissues tested.

Images



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