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Anti-KAT2A/GCN5 Picoband Antibody

Catalog # ABO12399

Specification

Anti-KAT2A/GCN5 Picoband Antibody - Product Information

Application	**WB**
Primary Accession	Q92830
Host	**Rabbit**
Reactivity	**Human**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Histone acetyltransferase KAT2A(KAT2A) detection. Tested with WB in Human.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-KAT2A/GCN5 Picoband Antibody - Additional Information

Gene ID 2648

Other Names
Histone acetyltransferase KAT2A, 2.3.1.48, General control of amino acid synthesis protein 5-like 2, Histone acetyltransferase GCN5, HsGCN5, Lysine acetyltransferase 2A, STAF97, KAT2A, GCN5, GCN5L2, HGCN5

Calculated MW
93926 MW KDa

Application Details
Western blot, 0.1-0.5 µg/ml, Human

Subcellular Localization
Nucleus .

Tissue Specificity
Expressed in all tissues tested, with most abundant expression in ovary.

Protein Name
Histone acetyltransferase KAT2A

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen
A synthetic peptide corresponding to a sequence at the N-terminus of human KAT2A/GCN5 (75-106aa DPARPGLSQQQRASQRKAQVRGLPRAKKLEKL), identical to the related mouse and rat sequences.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage	**At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.**

Anti-KAT2A/GCN5 Picoband Antibody - 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 a strong preference for acetylation of H3 at 'Lys-9' (H3K9ac) (PubMed:21131905). 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 glutarylation 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.

Anti-KAT2A/GCN5 Picoband Antibody - 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

Anti-KAT2A/GCN5 Picoband Antibody - Images

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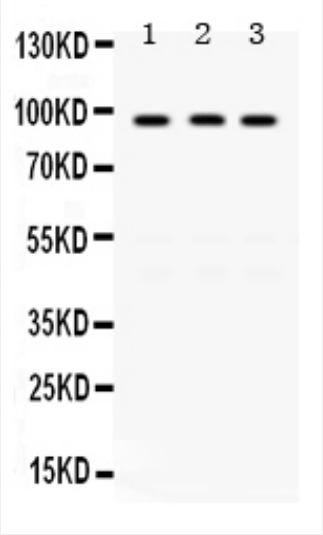

Anti- KAT2A/GCN5 Picoband antibody, ABO12399, Western blottingAll lanes: Anti KAT2A/GCN5 (ABO12399) at 0.5ug/mlLane 1: A431 Whole Cell Lysate at 40ugLane 2: 22RV1 Whole Cell Lysate at 40ugLane 3: COLO320 Whole Cell Lysate at 40ugPredicted bind size: 94KDObserved bind size: 94KD

Anti-KAT2A/GCN5 Picoband Antibody - Background

Histone acetyltransferase KAT2AÂ is anÂ enzymeÂ that in humans is encoded by theÂ KAT2AÂ gene. It is mapped to 17q21. KAT2A, or GCN5, GCN5L2, is a histone acetyltransferase (HAT) that functions primarily as a transcriptional activator. The GCN5 protein, a regulator of transcription activation in yeast, promotes maximal levels of transcription by 2 transcriptional activators, GCN4 and the HAP2-HAP3-HAP4 complex.Â The GCN4 protein activates transcription of a large number of amino acid biosynthetic genes under limiting amino acid conditions and the HAP2-HAP3-HAP4 complex is thought to mediate transcription of genes involved in respiratory functions.Â GCN5 also functions as a repressor of NF-kappa-B by promoting ubiquitination of the NF-kappa-B subunit RELA in a HAT-independent manner.