

GCN5 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP1078d**Specification**

GCN5 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession [O92830](#)
Other Accession [O8N1A2](#)

GCN5 Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 2648

Other Names

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

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP1078d](/product/products/AP1078d) was selected from the N-term region of human GCN5. 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.

GCN5 Antibody (N-term) Blocking Peptide - 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](http://www.uniprot.org/citations/29211711), PubMed:[35995428](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/29211711)). Succinylation of histones gives a specific tag for epigenetic transcription activation (PubMed:[29211711](http://www.uniprot.org/citations/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). 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, PPARGC1A, PLK4 and TBX5 (PubMed:17301242, PubMed:16753578, PubMed:27796307, PubMed:29174768). 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.

GCN5 Antibody (N-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

GCN5 Antibody (N-term) Blocking Peptide - Images

GCN5 Antibody (N-term) Blocking Peptide - Background

GCN5 functions as a histone acetyltransferase (HAT) to promote transcriptional activation. Acetylation of histones gives a specific tag for epigenetic transcription activation. This protein has significant histone acetyltransferase activity with core histones, but not with nucleosome core particles.

GCN5 Antibody (N-term) Blocking Peptide - References

Sabo,A., Mol. Cell. Biol. 28 (7), 2201-2212 (2008)Wiper-Bergeron,N., Proc. Natl. Acad. Sci. U.S.A. 104 (8), 2703-2708 (2007)Oishi,H., J. Biol. Chem. 281 (1), 20-26 (2006)Kikuchi,H., Gene 347 (1), 83-97 (2005)