

Product datasheet for **MG222236**

Kat2a (NM_020004) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Kat2a (NM_020004) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Kat2a
Synonyms:	1110051E14Rik; AW212720; Gcn5; Gcn5l2; mmGCN5
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG222236 representing NM_020004
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCGGAACCTTCCCAGGCCCAAACCCGGTCCCGGCAGCGCAGCCCCGGCCCCCTCACTCCCCAGCCC
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 CCCTGCCCCAGCTGCAGCCCCAGCTGGGAGCACAGGGAGTGGGGGCGCCGGGTAGGAAGTGGGGGGAT
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 GTGCCAAGAAGCTTGAGAACTAGGGTCTTCTCAGCTTGCAAGGCCAATGAAACCTGCAAGTGTAAATGG
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 CCAACTGCCGGGAGTACAATCCCCCAGACAGCAATACTGTCGCTGCGCCAGTGCCTGGAGAAGTTCTT
 CTACTTCAAGCTCAAAGAGGGAGGGCTCATCGACAAG

ACCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG222236 representing NM_020004
 Red=Cloning site Green=Tags(s)

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MAEPSQAPNPVPAQAQRPLHSPAPAPTSTPAPSPASASTPAPTAPAPAPAAAAPAGSTGSGGAGVGSAGD
PARPGLSQQRASQRKAQVRGLPRAKLEKLGVSACKANETCKCNGWKNPKPPTAPRMDLQQPAANLSE
LCRSCHEPLADHVSHLENVSEDEINRLLGMVVDVENLFMSVHKEEDTDTKQVYFYLKLLRKCILQMTRP
VVEGSLGSPPEKPNIEQGVLFVQYKFSHLAPRERQTMFELSKMFLLCLNYWKLETPAQFRQRSQSEDV
ATYKVNRYTRWLCYCHVPQSCDSLPRYETTHVFGRSLLRSIFTVTRRQLLEKFRVEKDKLVPEKRTLILTH
FPKFLSMLLEEIIYGANSPIWESGFTMPPESTQLVPRPATVSATVVPSFSPSMGGGSNSSLSDSAGTEP
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PTQGFTEIVFCAVTSNEQVKGYGTHLMNHLKEYHIKHSILYFLTYADEYAIIGYFKKQGFSDIKVPKSRV
LGYIKDYEGATLMECLNPRIPYTELSHIKKQKEIIKKLIERKQAQIRKVYPGLSCFKEGVRQIPVESV
PGIRETGWKLPGKEKELKDPDQLYTTLNLLAQIKSHPSAWPFMEPVKKSEAPDYVEYIRFPIDLKTM
TERLRSRYVTRKLFVADLQRVIANCREYNPPDSEYCRCSALEKFFYFKLKEGGLIDK
  
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TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_020004.5](#), [NP_064388.2](#)

RefSeq Size: 3048 bp

RefSeq ORF: 2493 bp

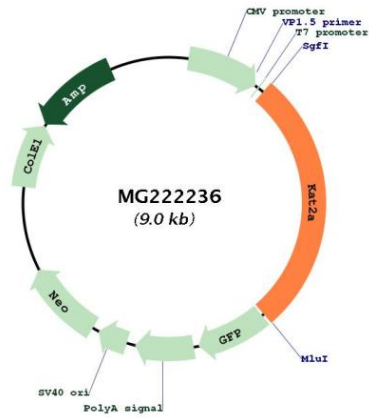
Locus ID: 14534

UniProt ID: [Q9JHD2](#)

Cytogenetics: 11 63.53 cM

Gene Summary: Protein lysine acyltransferase that can act both as an acetyltransferase and succinyltransferase, depending on the context (PubMed:28424240). 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 (By similarity). Succinylation of histones gives a specific tag for epigenetic transcription activation (By similarity). Association with the 2-oxoglutarate dehydrogenase complex, which provides succinyl-CoA, is required for histone succinylation (By similarity). In different complexes, functions either as an acetyltransferase (HAT) or as a succinyltransferase: in the SAGA and ATAC complexes, acts as a histone acetyltransferase (By similarity). Has significant histone acetyltransferase activity with core histones, but not with nucleosome core particles (By similarity). Acetylation of histones gives a specific tag for epigenetic transcription activation (PubMed:28424240). Involved in long-term memory consolidation and synaptic plasticity: acts by promoting expression of a hippocampal gene expression network linked to neuroactive receptor signaling (PubMed:25024434). 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 (PubMed:28424240). Also acetylates non-histone proteins, such as CEBPB, PLK4 and TBX5 (PubMed:17301242). Involved in heart and limb development by mediating acetylation of TBX5, acetylation regulating nucleocytoplasmic shuttling of TBX5 (By similarity). Acts as a negative regulator of centrosome amplification by mediating acetylation of PLK4 (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MG222236