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Anti-KAT8 / MYST1 / MOF Rabbit Monoclonal Antibody

Catalog # ABO15334

Product Information

Application	WB, IHC, IF, ICC, IP, FC
Primary Accession	Q9H7Z6
Host	Rabbit
Isotype	IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid
Description	Anti-KAT8 / MYST1 / MOF Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF, IP, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat.

Additional Information

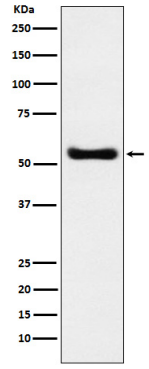
Gene ID	84148
Other Names	Histone acetyltransferase KAT8, 2.3.1.48 {ECO:0000269|PubMed:10786633, ECO:0000269|PubMed:21217699, ECO:0000269|PubMed:22020126, ECO:0000269|PubMed:22547026, ECO:0000269|PubMed:27768893, ECO:0000269|PubMed:33657400, ECO:0000269|Ref.33, ECO:0000305|PubMed:16543150}, Lysine acetyltransferase 8, MOZ, YBF2/SAS3, SAS2 and TIP60 protein 1 {ECO:0000303|Ref.5}, MYST-1 {ECO:0000303|Ref.5}, Males-absent on the first protein homolog, hMOF, Protein acetyltransferase KAT8, 2.3.1.-, Protein propionyltransferase KAT8, 2.3.1.-, KAT8 {ECO:0000303|PubMed:33657400, ECO:0000312|HGNC:HGNC:17933}
Calculated MW	52403
Application Details	WB 1:500-1:1000 IHC 1:50-1:200 ICC/IF 1:100-1:500 IP 1:100 FC 1:100
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: 19K10
Immunogen	A synthesized peptide derived from human KAT8 / MYST1 / MOF
Purification	Affinity-chromatography

Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Protein Information

Name	KAT8 {ECO:0000303|PubMed:33657400, ECO:0000312|HGNC:HGNC:17933}
Function	Histone acetyltransferase that catalyzes histone H4 acetylation at 'Lys-5'- and 'Lys-8' (H4K5ac and H4K8ac) or 'Lys-16' (H4K16ac), depending on the context (PubMed:12397079, PubMed:16227571, PubMed:16543150, PubMed:20018852, PubMed:21217699, PubMed:22020126, PubMed:22547026, PubMed:31794431, PubMed:33837287). Catalytic component of the MSL histone acetyltransferase complex, a multiprotein complex that mediates the majority of histone H4 acetylation at 'Lys-16' (H4K16ac), an epigenetic mark that prevents chromatin compaction (PubMed:12397079, PubMed:16227571, PubMed:16543150, PubMed:21217699, PubMed:22020126, PubMed:22547026, PubMed:33657400, PubMed:33837287). H4K16ac constitutes the only acetylation mark intergenerationally transmitted and regulates key biological processes, such as oogenesis, embryonic stem cell pluripotency, hematopoiesis or glucose metabolism (By similarity). The MSL complex is required for chromosome stability and genome integrity by maintaining homeostatic levels of H4K16ac (PubMed:33837287). The MSL complex is also involved in gene dosage by promoting up-regulation of genes expressed by the X chromosome (By similarity). X up-regulation is required to compensate for autosomal biallelic expression (By similarity). The MSL complex also participates in gene dosage compensation by promoting expression of Tsix non-coding RNA (By similarity). As part of the NSL histone acetyltransferase complex, catalyzes histone H4 acetylation at 'Lys-5'- and 'Lys-8' (H4K5ac and H4K8ac) at transcription start sites and promotes transcription initiation (PubMed:20018852, PubMed:22547026, PubMed:33657400). The NSL complex also acts as a regulator of gene expression in mitochondria: KAT8 associates with mitochondrial DNA and controls expression of respiratory genes in an acetyltransferase- dependent mechanism (PubMed:27768893). Also functions as an acetyltransferase for non-histone targets, such as ALKBH5, COX17, IRF3, KDM1A/LSD1, LMNA, PAX7 or TP53/p53 (PubMed:17189187, PubMed:19854137, PubMed:37369679). Acts as an inhibitor of antiviral immunity by acetylating IRF3, preventing IRF3 recruitment to promoters (By similarity). Acts as a regulator of asymmetric division in muscle stem cells by mediating acetylation of PAX7 (By similarity). As part of the NSL complex, acetylates TP53/p53 at 'Lys-120' (PubMed:17189187, PubMed:19854137). Acts as a regulator of epithelial-to-mesenchymal transition as part of the NSL complex by mediating acetylation of KDM1A/LSD1 (PubMed:27292636). The NSL complex is required for nuclear architecture maintenance by mediating acetylation of LMNA (By similarity). Promotes mitochondrial integrity by catalyzing acetylation of COX17 (By similarity). In addition to protein acetyltransferase activity, able to mediate protein propionylation (PubMed:29321206).
Cellular Location	Nucleus. Chromosome Mitochondrion. Note=Translocated into the nucleus via its association with importin-alpha-1 (KPNA2) (PubMed:28991411). As part of the NSL complex, associates with the proximal part of promoters and transcription start sites (PubMed:33657400). As part of the MSL complex, associates with gene bodies (By similarity). Also localizes to mitochondria; associates with mitochondrial DNA and regulates mitochondrial gene expression (PubMed:27768893). {ECO:0000250|UniProtKB:Q9D1P2, ECO:0000269|PubMed:27768893, ECO:0000269|PubMed:28991411, ECO:0000269|PubMed:33657400}

Images



Western blot analysis of KAT8 / MYST1 / MOF expression in HeLa cell lysate.

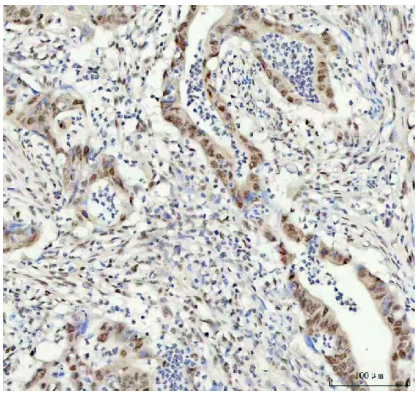


Figure 2. IHC analysis of KAT8 / MYST1 / MOF using anti-KAT8 / MYST1 / MOF antibody (M02757-1). KAT8 / MYST1 / MOF was detected in a paraffin-embedded section of human colorectal adenocarcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1:50 rabbit anti-KAT8 / MYST1 / MOF Antibody (M02757-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

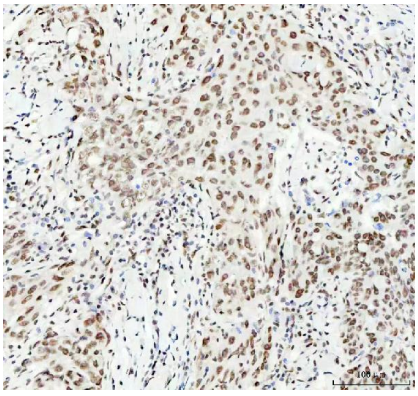


Figure 3. IHC analysis of KAT8 / MYST1 / MOF using anti-KAT8 / MYST1 / MOF antibody (M02757-1). KAT8 / MYST1 / MOF was detected in a paraffin-embedded section of human breast cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1:50 rabbit anti-KAT8 / MYST1 / MOF Antibody (M02757-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

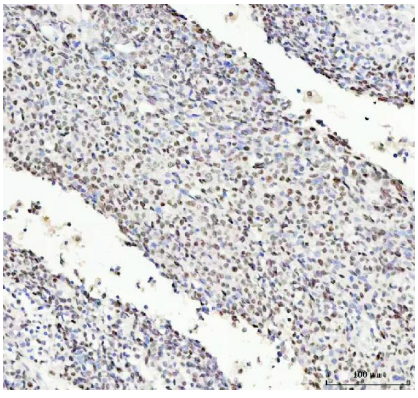


Figure 4. IHC analysis of KAT8 / MYST1 / MOF using anti-KAT8 / MYST1 / MOF antibody (M02757-1). KAT8 / MYST1 / MOF was detected in a paraffin-embedded section of human lung squamous cell carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1:50 rabbit anti-KAT8 / MYST1 / MOF Antibody (M02757-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit

(Catalog # SV0002) with DAB as the chromogen.

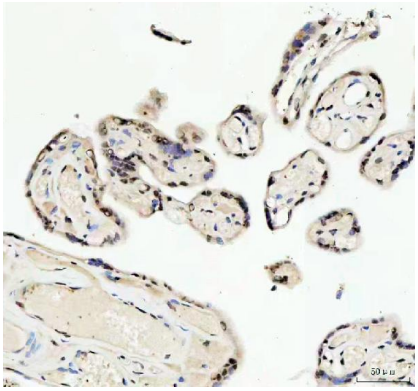


Figure 5. IHC analysis of KAT8 / MYST1 / MOF using anti-KAT8 / MYST1 / MOF antibody (M02757-1). KAT8 / MYST1 / MOF was detected in a paraffin-embedded section of human placenta tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1:50 rabbit anti-KAT8 / MYST1 / MOF Antibody (M02757-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

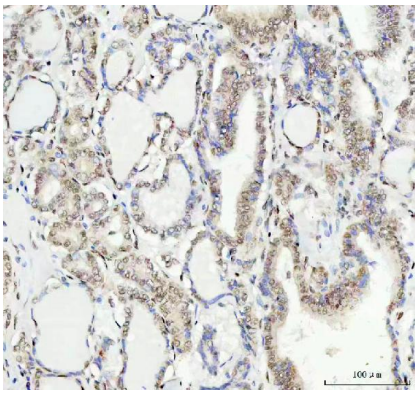


Figure 6. IHC analysis of KAT8 / MYST1 / MOF using anti-KAT8 / MYST1 / MOF antibody (M02757-1). KAT8 / MYST1 / MOF was detected in a paraffin-embedded section of human thyroid cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1:50 rabbit anti-KAT8 / MYST1 / MOF Antibody (M02757-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

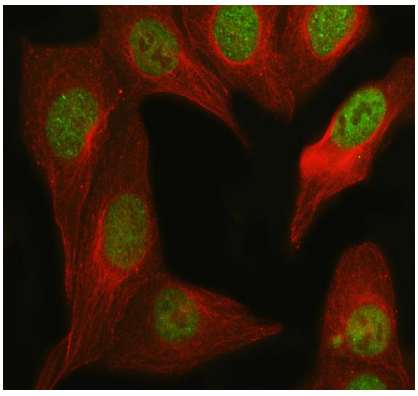


Figure 7. IF analysis of KAT8 / MYST1 / MOF using anti-KAT8 / MYST1 / MOF antibody (M02757-1) and anti-Beta Tubulin antibody (M01857-3). KAT8 / MYST1 / MOF was detected in immunocytochemical section of U2OS cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated at 1:100 with rabbit anti-KAT8 / MYST1 / MOF Antibody (M02757-1) and mouse anti-Beta Tubulin antibody (M01857-3) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) and Dylight550-conjugated Anti- mouse IgG Secondary Antibody (red)(Catalog#BA1133) were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37°C. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.