

## Product datasheet for **TA386427**

### H4 Mouse Monoclonal Antibody [Clone ID: KM-2]

#### Product data:

Product Type:	Primary Antibodies
Clone Name:	KM-2
Applications:	ELISA, IF, IHC, WB
Reactivity:	Human
Host:	Mouse
Isotype:	IgG2a, kappa
Clonality:	Monoclonal
Immunogen:	KM-2 antibody was derived from an MRL/lpr lupus mouse.
Specificity:	KM-2 antibody recognizes the N-terminal peptides 1-20 of histone H2A and 1-29 of histone H4 which have a large sequence homology (van Bruggen et al., 1997; PMID: 9027774). Histone H4 acetylation on lysines 8, 12 and 16 significantly increases the antibody's binding while the acetylation at K5 decreases it (Dieker et al., 2007; PMID: 17530637).

The antibody KM-2 shows significant increase in activity with histone H4 when it is acetylated on lysines 8, 12 and 16 which are hyperacetylated in conditions, such as lupus (SLE); and thus KM-2 can be used in the detection of the apoptosis-induced histone modifications characteristic of lupus and in the analysis of its pathogenesis (Dieker et al., 2007; PMID: 17530637). This antibody was successfully used to identify both Histone H4 as well as H2A in the extracts of Jurkat cells via Western blot, showing considerable increase in activity in cells with induced apoptosis leading to hyperacetylation (Dieker et al., 2007; PMID: 17530637). Similar results were achieved for the immunofluorescence staining of Jurkat cells. The enhanced reactivity of KM-2 with apoptotic H4 and apoptotic H2A was not Jurkat cell specific and was also observed for the monocytic U937 cell line which indicated its general applicability (Dieker et al., 2007; PMID: 17530637). Analogous results were also achieved during the ELISA analysis of plasma samples of (diseased) MRL/lpr lupus mice, with the visible activity enhancement in the sick, apoptotic specimens (Dieker et al., 2007; PMID: 17530637). Finally, KM-2 (KM2) antibody was used to identify histones in the immune deposits in kidney biopsy samples of DPGN (Diffuse proliferative glomerulonephritis) patients (van Bruggen et al., 1997; PMID: 9027774).

**Formulation:** PBS with 0.02% Proclin 300.



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<b>Concentration:</b>	lot specific
<b>Conjugation:</b>	Unconjugated
<b>Storage:</b>	Please store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C. Avoid freeze and thaw cycles.
<b>Stability:</b>	3 years from dispatch.