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Anti-Ubiquitinated Histone H2B (Lys123) Antibody, clone 1B3F12/A9 clone 1B3F12/A9, from mouse

Art. ID	SAF-MABE1785-25UG
Unit	1 x 25 µg
Deliverydetails	No Dangerous Good

Description

Histone H2B.2 (UniProt: P02294) is encoded by the HTB2 (also known as H2B2) gene (Gene ID: 852284) in Saccharomyces cerevisiae (yeast). Histones are basic nuclear proteins that are responsible for the nucleosome structure of chromatin in eukaryotes. Two molecules of each of the four core histones (H2A, H2B, H3, and H4) form an octamer, around which DNA is wrapped in repeating units, called nucleosomes, which limits DNA accessibility to the cellular machineries, which require DNA as a template. Histones thereby play a central role in transcription regulation, DNA repair, DNA replication and chromosomal stability. DNA accessibility is regulated via a complex set of post-translational modifications of histones, also called histone code, and nucleosome remodeling. Histone H2B is one of the main histone proteins involved in the structure of chromatin in eukaryotic cells. Featuring a main globular domain and a long N terminal tail, H2B is involved with the structure of the nucleosomes of the 'beads on a string' structure. Histone H2B can be monoubiquitinated on Lysine123 by RAD6/UBC2-BRE1 complex to form H2BK123Ub1 complex that gives a specific tag for epigenetic transcriptional activation and is also a prerequisite for H3K4me and H3K79me formation. H2BK123ub1 is reported to modulates the formation of double-strand breaks during meiosis and is a required for DNA-damage checkpoint activation. Histone H2B is phosphorylated by STE20 to form H2BS10ph during progression through meiotic prophase and may be correlated with chromosome condensation. Histone H2B can undergo acetylation by GCN5, a component of the SAGA complex, to form H2BK11ac and H2BK16ac. Acetylation of N-terminal lysines and particularly formation of H2BK11acK16ac has a positive effect on transcription.