

Histone H3 (Phospho-S10) monoclonal antibody

Catalog: MB67061

Host: Mouse

Reactivity: Human, Mouse

BackGround:

Multiple exome sequencing analyses have uncovered a high frequency of histone H3 driver mutations in a number of different cancers, including diffuse intrinsic pontine glioma (DIPG), chondroblastoma, sarcomas, and HPV-negative head and neck squamous cell carcinoma. Previous studies have shown that lysine to methionine histone mutations in these cancers act as potent inhibitors of their respective lysine methyltransferases, resulting in gross alterations to the histone methylation landscape and deregulation of gene expression. In DIPG for example, the histone H3 K27M mutation is accompanied by a dramatic reduction in the levels of polycomb repressive complex 2 (PRC2)-mediated tri-methylation of histone H3 lysine 27, changes in the distribution of PRC2 on the genome, and altered expression of genes associated with various cancer pathways. In chondrocytomas, the histone H3 K36M mutation functions to inhibit the WHSC1 (MMSET) and SETD2 histone methyltransferases, resulting in a reduction in the levels of histone H3 lysine 36 tri-methylation and deregulation of a number of cancer-associated genes. Similar to the H3K27M and H3K36M mutations, the histone H3 K9M mutation has been shown to inhibit the H3K9-directed histone methyltransferase G9a, resulting in reduced levels of histone H3 lysine 9 trimethylation. Given the widespread role of G9a in the regulation of gene expression, it is likely that this K9M mutation also plays a role in cancer.

Product:

Mouse IgG1. Liquid in PBS, pH 7.3, 30% glycerol, and 0.01% sodium azide.

Molecular Weight:

~ 17 kDa

Swiss-Prot:

P84243

Purification&Purity:

This antibody is purified through a protein G column.

Applications:

WB (1/500 - 1/1000)

Storage&Stability:

Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

Specificity:

Recognizes endogenous levels of Histone H3 (pS10) protein.

DATA:



Western blot analysis of Histone H3 (pS10) expression in HL60 treated with 100nM of calyculin (A) whole cell lysates.

Note:

For research use only, not for use in diagnostic procedure.

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