H3K27

Histone H3 Lysine 27 (H3K27): Histone H3 is a protein involved in packaging DNA in the cell nucleus. H3K27 refers to a specific amino acid, lysine, at position 27 on the histone H3 protein. Modifications to H3K27 play a crucial role in the epigenetic regulation of gene expression.

H3K27 can be subject to various modifications, including methylation, acetylation, and more, which can either activate or repress nearby genes. For example, trimethylation of H3K27 (H3K27me3) typically results in gene silencing, whereas acetylation of H3K27 (H3K27ac) is associated with gene activation. The balance of these modifications is critical for controlling gene expression, and disruptions in this balance can have profound effects on cellular functions and may be linked to diseases, including cancer.

see Histone H3K27 mutation.

H3K27 is the 27th aminoacid in Histone H3, which as a lysine is written “K” in single-letter amino acid notation. It is subject to posttranslational modification with epigenetic effects.

H3K27ac, an acetylation

H3K27me3, a tri methylation

H3K27M-mutant pineal parenchymal tumor.

Diffuse midline glioma H3 K27M-mutant.