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MSin3

National Cancer Institute

Source

National Cancer Institute. *mSin3*. NCI Thesaurus. Code C19885.

Important in eukaryotic gene regulation, histone acetylation and deacetylation are catalyzed by histone deacetylase complexes that include SAP30, SAP18, histone deacetylases, histone-binding proteins and other proteins. SAP18 interacts with SIN3 and enhances SIN3-mediated transcriptional repression. Gene-specific targeting of the SIN3 co-repressor complex by DNA-bound repressors is important in eukaryotic gene silencing. The SIN3 co-repressor specifically associates with some transcriptional repressors, including members of the MAD family important in development. The PAH2 domain of SIN3A interacts with the transrepression domain (SID) of MAD1. MAD-MAX complexes repress transcription through recruitment of SIN3 co-repressor. The MXI1 protein family functions as potent antagonists of MYC oncoproteins. They compete with MYC for the protein MAX and for consensus DNA binding sites and to recruit SIN3 proteins and their associated co-repressors. (NCI)