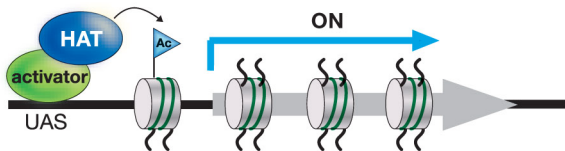


Gene activator recruits histone acetyltransferase



Gene repressor recruits histone deacetylase

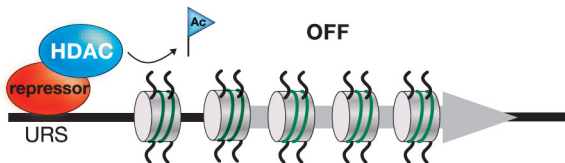


Figure 2. Histone-modifying Enzymes Are Recruited to Promoters by DNA-binding Transcription Factors

Histone acetyltransferases (HAT) are recruited by activators that bind to specific upstream activating sequences (UAS). This enzyme catalyzes the acetylation of local histones, known to contribute to transcriptional activation. Histone deacetylases (HDAC) are recruited by repressors of transcription that bind to upstream repressive sequences (URS) and deacetylate local histones. This contributes to transcriptional repression.