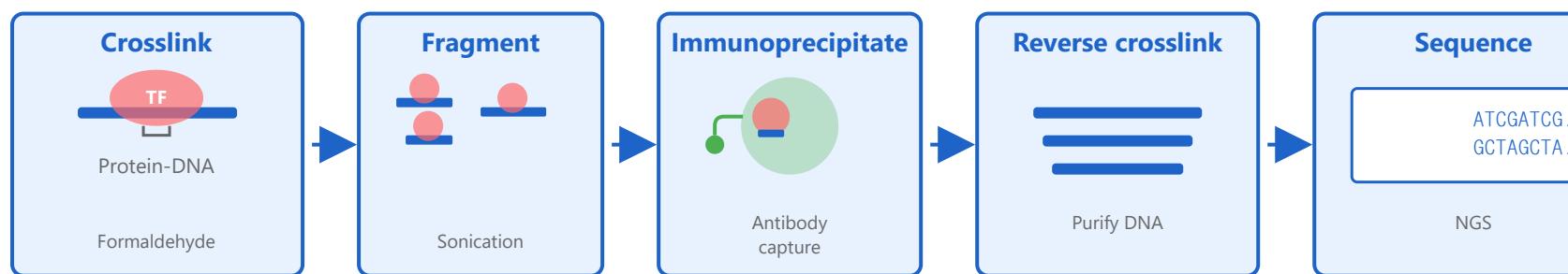


ChIP-seq (Chromatin Immunoprecipitation Sequencing)

Overview

- Identify protein-DNA binding sites genome-wide
- Study transcription factor binding
- Map histone modifications (epigenetics)
- Understand gene regulation mechanisms

ChIP-seq Workflow



Common Targets

Analysis Tools

- Transcription factors (TFs)
 - H3K4me3 (active promoters)
 - H3K27ac (active enhancers)
 - H3K27me3 (repression)
- MACS2 (peak calling)
 - deepTools (visualization)
 - Homer (motif discovery)
 - DiffBind (differential binding)

Requires high-quality antibodies and input control samples