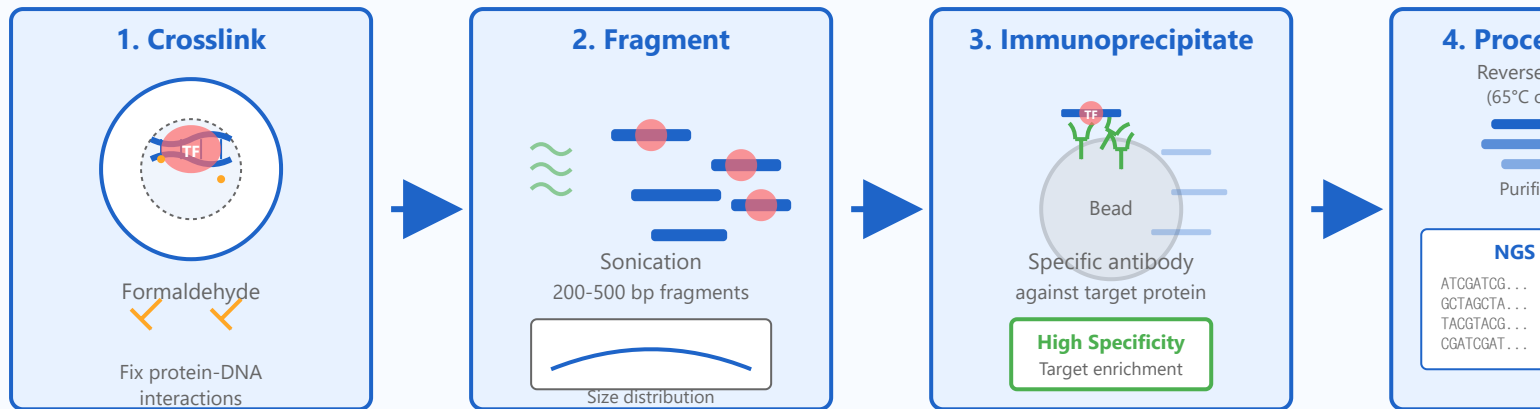


# ChIP-seq (Chromatin Immunoprecipitation Sequencing)

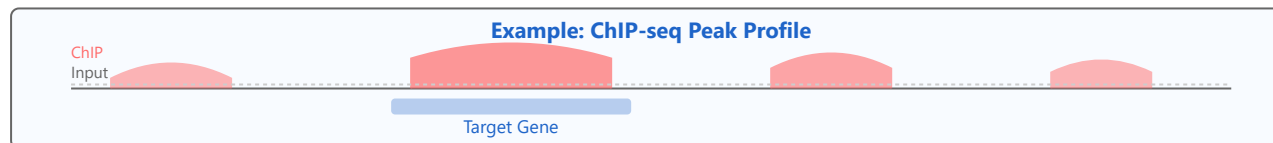
## ChIP-seq Mechanism and Workflow

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## ChIP-seq: Mapping Protein-DNA Interactions



## ChIP-seq Data Analysis Pipeline



### Common Targets

- Transcription factors (TFs)
- H3K4me3 (active promoters)
- H3K27ac (active enhancers)
- H3K27me3 (repression)

### Critical Controls

- Input DNA (no IP)
- IgG control (non-specific)
- Biological replicates
- Technical validation

Requires high-quality antibodies and proper controls for reliable results