

CHROMATIN IMMUNOPRECIPITATION

Before starting please read the entire protocol, you must optimize sonications conditions to shear your DNA. Sheared chromatin to an average length of about 200-800 bp is recommended.

Products

- Blocking Buffer
- Ip Buffer
- Specific or non relevant ChIP antibodies
- Sheared cross-linked Chromatin
- Washing Buffer
- Elution Buffer
- Proteinase K (10mg/ml)

Equipment

- Magnet
- Microtubes
- Rotators, thermomixer



1- ChIP-Adembeads Protein A/G Blocking Step

- Transfer **25µl of ChIP-Adembeads** to a microtubube 15ml.
- Add **225µl of Blocking Buffer**.

Blocking Buffer must be stored at room temperature (RT).

- Homogenize by pipeting and **incubate 15 min at RT** under mixing.

2-Immunoprecipitation

- Place the tube on the magnet until supernatant clearing and discard the supernatant.
- Resuspend the beads in **125µl of IP Buffer**.
- Add **1-3 µg of antibody** (specific or non relevant) and **incubate 1h at RT**.

At this step, beads agglutination may occur corresponding to antibody capture by the beads.

- Add **900µl of IP Buffer** and resuspend the beads by pipeting.
- Add **100µl of sheared cross- linked chromatin**.
- **Incubate overnight at 4°C under agitation**.



Procedure

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3-Washing steps

- Place the tube on the magnet until supernatant clearing and discard the supernatant.
- Resuspend the beads in **300µl of Washing Buffer I** and **incubate 10 min at RT** under mixing.
- Place the tube on the magnet until supernatant clearing and discard the supernatant.
- Resuspend the beads in **300µl de Washing Buffer II** and **incubate 10 min at RT** under mixing.
- Place the tube on the magnet until supernatant clearing and discard the supernatant.
- Resuspend the beads in **300µl de Washing Buffer III** and **incubate 10 min at RT** under mixing.
- Place the tube on the magnet until supernatant clearing and discard the supernatant.
- Resuspend the beads in **300µl de Washing Buffer IV**.
- Place the tube on the magnet until supernatant clearing and discard the supernatant.
- Resuspend the beads in **300µl de Washing Buffer IV**.



At this step, resuspend thoroughly by pipeting the magnetic particles.

4- Elution and Reversion

- Place the tube on the magnet until supernatant clearing and discard the supernatant.
- Resuspend thoroughly by pipeting the beads in **300µl of Elution Buffer**.
- Add **10µl of Proteinase K (10mg/ml)** and **incubate 2h at 37°C** under agitation.
- Place the tube on the magnet until supernatant clearing and discard the supernatant.
- **Collect the supernatant** in a new microtube and **incubate the supernatant overnight at 65°C** under mixing.

Do not perform the incubation at 65°C in the presence of beads.

Procedure

Tips

If you use ChIP-Adembeads, we recommend NaCl Buffer for washing steps with increasing concentrations (150-500nM) and SDS for Elution Buffer.

If you use ChIP-Adem-Kit, the Elution Buffer contains SDS. Before PCR analysis, purify your DNA.

For one ChIP with 25 µl of ChIP-Adembeads, 3 µg of antibody is the optimal amount.