

## Western blot (immunoblotting)

### 1. What is Western blot?

A technique for detecting **specific proteins** separated by electrophoresis by use of labeled antibodies. So called since it has some similarity to a **Southern blot**.

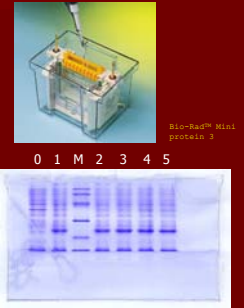
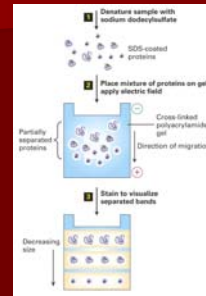
### 2. Why we have to use it?

We can use this technique to identify a **target protein** in a complex mixture, and we can also use it to measure its **expression level**.

### 3. How to do it?

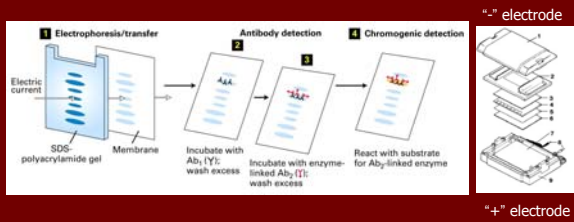
## Step1. Use gel electrophoresis to separate proteins by size

SDS-PAGE -- Sodium dodecylsulfate polyacrylamide gel electrophoresis



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## Step2. transfer the proteins in the gel onto a membrane and then use the specific antibody to identify the target protein



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Bio-Rad™ Semi-dry transfer cell

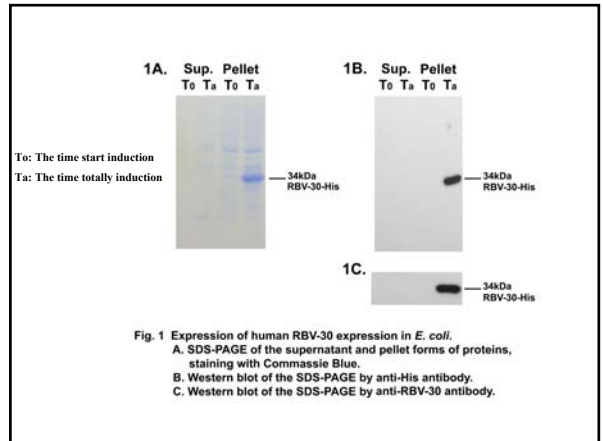


Fig. 1 Expression of human RBV-30 expression in *E. coli*.  
 A. SDS-PAGE of the supernatant and pellet forms of proteins, staining with Coomassie Blue.  
 B. Western blot of the SDS-PAGE by anti-His antibody.  
 C. Western blot of the SDS-PAGE by anti-RBV-30 antibody.