

## Detection Antibody HRP labeling For diagnostics application (ELISA)

1. Dissolve 5mg HRP in 1ml distilled water.
2. Add 200  $\mu$ L of 0.1M NaIO<sub>4</sub> solution <sup>[1]</sup> (freshly prepared just before use) to the solution obtained in step 1 and stirred for 20 minutes at room temperature. Protect from light.
3. Put the solution obtained in step 2 into a dialysis bag and dialyzed with 1mM sodium acetate buffer <sup>[2]</sup> (PH4.4) at 4°C overnight.
4. Dissolve 10mg antibody in 1mL 0.01M carbonate buffer.
5. Add 20  $\mu$ L 0.2M PH 9.5 carbonate buffer <sup>[3]</sup> to adjust the PH of the solution obtained in step 3 to 9.0~9.5, then immediately add to the antibody solution obtained in step 4, and gently stir at room temperature for 2 hours. Protect from light.
6. Add 100  $\mu$ L 4mg/ml NaBH<sub>4</sub> solution <sup>[4]</sup> (freshly prepared just before use), mix well, 4°C for 2 hours.
7. Filter the reaction mixture obtained in step 6 was by Sephadex-25 column, elute with PBS, and determine the optical density at 280 nm and 403 nm of each well.
8. Collect the solutions of the wells with light absorption both at 280 nm and 403 nm, which is HRP-labeled antibody conjugates, use directly or store at -20 °C.

**[1] 0.1M NaIO<sub>4</sub> solution:**

NaIO<sub>4</sub>            241 mg  
Add distilled water to 10ml

**[2] 1mM PH4.4 sodium acetate buffer:**

0.2M NaAc        3.7ml  
0.2M HAc         6.3ml  
Add distilled water to 2000ml

**[3] 0.2M PH 9.5 carbonate buffer:**

Na<sub>2</sub>CO<sub>3</sub>           0.32g  
NaHCO<sub>3</sub>          0.586g  
Add distilled water to 50ml

**[4] 4mg/ml NaBH<sub>4</sub> solution:**

NaBH<sub>4</sub>            4mg  
Add distilled water to 1ml