



**Acetylcholinesterase (AChE) Activity Assay Kit (For research use only)**

**Catalog Nos. KPG-AChE Lot Nos. KPG-AChE1**

**Components of the Kit:**

- Solution 1 (CN. KPG-AChE1) , 1 Vial 30 mL
- Solution 2 (CN. KPG- AChE2), 1 Vial 500 µL
- Solution 3 (CN. KPG- AChE3), 1 Vial 1 mL

**Other materials needed:** Samplers, ELISA plate and ELISA reader covering 410 nm.

**Preparation of the solution:** The solutions are ready to use.

**Preparation of samples:**

**Preparation of RBC:** Add 6 mL distilled water to the 10 mL falcon and add 100 µL **washed** Red Blood Cells (RBCs needs to be washed before test) to the falcon. Then mix the falcon and incubate for 3 minutes.

**Preparation of Tissues:** Add 1 mL PBS 1X to the 1.5 mL tube and add 100 mg tissue. Homogenize the tissue completely.

**Procedure:**

1. Before starting the procedure keep the kit components at room temperature for 20 minutes.
2. Add 300 µL solution 1 to all the tubes, including blank and tests.  
Note: Tubes need to be dark or covered with aluminum foil.
3. Add 100 µL prepared samples to the test tube and 100 µL distilled water to the blank tube.
4. Mix the tubes and incubate at 37°C (Water bath) for 10 minutes and then add 5 µL solution 2 and mix well.
5. Centrifuge the tubes at 2500 RPM for 5 minutes.
6. Add 10 µL solution 3.
7. Add 100 µL the supernatant to the ELISA wells and read the OD of the tubes at 410 nm.

**To calculate the AChE activity in the RBC, use the following formula:**

$$\text{RBC AChE Activity (U/L)} = \text{Test OD} \times 17.87$$

**To calculate the AChE activity in the tissues, use the following formula:**

$$\text{Tissue AChE Activity (U/mg)} = \text{Test OD} \times 29.2$$

**Safety directions:** The solutions are tissue hazard materials, hence, in the cases of contact with skin, eyes and ETC, wash with water and refer to hospital for additional medications.



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