Whole Blood Protein Extraction Kit (without detergent)

Item number: EX1350

Store: Store at 2-8°C for one year

Product Information:

Whole Blood Total Protein extraction kit is suitable for extracting total protein from various animal anticoagulant/non-anticoagulant whole blood samples. This kit contains a unique formula that effectively dissolves cell membrane components, including the plasma membrane, the nuclear membrane, and various organelle membranes.

All components of this kit do not contain detergent components, SDS, Triton X-100, chaps and other components that may affect mass spectrometry experiments, and the extracted protein samples can basically meet the requirements of any downstream proteomic related experimental studies. It has no influence on downstream applications such as NI column purification, molecular sieve, ion exchange and affinity purification. Does not contain EDTA and is compatible with downstream applications such as metal chelation and chromatography.

The protein extracted from this kit can be used for downstream protein research experiments such as Western Blotting, protein electrophoresis, immunoprecipitation, ELISA, transcriptional activity analysis, Gel shift gel blocking assay, and enzyme activity determination.

The protein extracted by this kit is an active protein with natural protein conformation, which has a wide range of downstream applications. The ability of the extract to lyse cells is mild, and the lyse time should be optimized according to the actual sample.

Product composition:

Product components	50T	100T	Storage condition
Reagent A: Protein extract Solution A	20mL	40mL	Store at 2-8°C
Reagent B: protease inhibitor mixture B	100 mu L	200 mu L	Store at -20°C

Note: The protease inhibitor can also be stored 2-8 ° C before use with the lid uncovered, at this time in a solid state, and returned to room temperature or 37 ° C water for a short time after removal from the refrigerator Bath, turn into a liquid state, centrifuge to the bottom of the tube and then open the lid. After opening the lid, sterile subpack and store at -20°C. Use the reagent as soon as possible after unpacking

You need to bring your own reagent and equipment

Centrifuge, oscillator, vortex mixer, pipette, refrigerator, ice box, protein quantification kit 1xPBS buffer, centrifuge tube, suction tip, disposable gloves

Product use (for reference only) :

1. Extraction solution preparation: Add 2μl protease inhibitor mixture into every 500μl protein extraction solution, mix well and put on ice for later use.
2. 300μL whole blood samples were taken, 300 μl protein extract was added, thoroughly mixed, and oscillated at 4°C for 20-40 minutes.
3. Centrifuge at 4 ° C and 14000g for 10 min.
4. Inhale the supernatant into another pre-cooled clean centrifuge tube to obtain the whole blood protein.

5. The protein extract was quantified and divided into -80℃ refrigerator for reserve or directly used in downstream experiment.

Product Features:

1. Easy to use, extract protein from cells and tissues without grinding, repeated freeze-thaw, ultrasonic crushing and other pre-treatment.
2. The time of protein extraction is reduced to 30 minutes to 1 hour.
3. Containing protein stabilizer, the extracted protein is stable.
4. The background interference is low when the protein concentration is detected by UV.
5. The protein extract contains a variety of effective components, which can fully release cytoplasmic protein and nuclear protein, and can bind the released protein to prevent precipitation.
6. Protease inhibitor inhibits the degradation of protein, and the formula of protease inhibitor is optimized. The protease inhibitor mixture consists of 6 independent protease inhibitors AEBSF, Aprotinin, Leupeptin, Pepstatin A, Bestatin, E-64; Each inhibitor can specifically inhibit one or several protease activities. The composition of the mixture is optimized so that it can inhibit almost all important protease activities, including serine protease, cysteine protease, aspartate protease, alanyl-aminopeptidase, etc.
7. Determination of protein concentration: BCA method is recommended. Reagent A contains components that interfere with Bradford's method, resulting in inaccurate quantification. If dialysis has been performed or the buffer system has been replaced with a desalting column, the quantitation can be performed by the Bradford method.

Points to note:

(1) Before the formal experiment, please select a few samples for **pre-experiment**, in order to optimize the experimental conditions and achieve the best experimental results.
(2) Centrifuge the reagent in the screw cap microreagent tube briefly before opening the cap, and centrifuge the liquid on the cap and inside wall to the bottom of the tube to avoid reagent loss when opening the cap.
(3) All reagents in the process of the experiment must be pre-cooled; All utensils must be pre-cooled in a -20℃ refrigerator. The sample must be kept at a low temperature during the whole process.
(4) Do not mix with other brands of reagents, otherwise it will affect the use effect.
(5) Contamination of the sample or reagent with bacteria or fungi or cross-contamination of reagents may result in false results.
(6) It is best to use disposable suction heads, tubes, bottles, or glassware, and reusable glassware must be washed and thoroughly removed of residual cleaners before use.
(7) All samples and exposed glassware should be disposed of in accordance with the prescribed procedure after the experiment is completed.