

# Animal Nuclear and Cytoplasmic Protein Extraction Kit

## (High-Efficiency Format for Western Blot Applications)

This kit utilizes optimized detergent formulations to enable rapid and efficient isolation of nuclear and cytoplasmic proteins from animal cells. The nuclear fraction includes nuclear membrane proteins as well as soluble nuclear proteins, such as histones and transcription factors. The protocol reduces nuclear protein extraction time to approximately 10 minutes while delivering significantly higher yields compared to conventional extraction kits. The system provides efficient nuclear-cytoplasmic separation, making it particularly suitable for Western Blot (WB) analysis.

Cat. No.	Size
BF7476-50	50 Samples
BF7476-250	250 Samples

## Key Features

### Unparalleled Yield

Up to 50% higher nuclear protein yield compared to leading competitor kits.

### High Purity

Cross-contamination between nuclear and cytoplasmic fractions is maintained below 5%.

### Rapid Protocol

Total extraction completed in approximately 1 hour

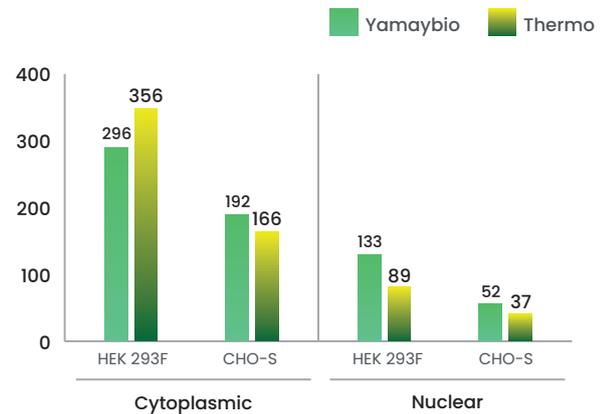
### Convenient Workflow

No gradient centrifugation required

# Unparalleled Yield

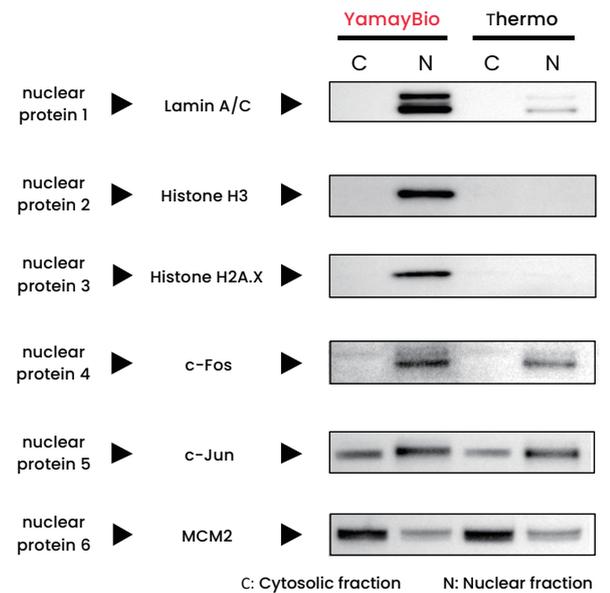
The kit yields approximately 200–300 µg of cytoplasmic protein and 50–150 µg of nuclear protein at 1 mg/mL.

Fig 1. Protein concentration was determined using the Ready-to-use BCA Protein Assay Kit (CAT. No.BH5484). Values represent the average of two independent isolations.



Compared to the Thermo kit, YamayBio BF7476 demonstrated higher recovery of nuclear proteins including Histone H3, Histone H2A.X, and c-Fos, while maintaining comparable cytoplasmic protein yields.

Fig 2. Western Blot analysis of nuclear proteins fractions extracted using YamayBio BF7476 and Thermo 78833. Equal numbers of Expi293F cells ( $2 \times 10^6$ ) were processed according to each manufacturer's instructions.



# High Purity

Ensures minimal cross-contamination between nuclear and cytoplasmic fractions, with contamination levels typically below 5%, resulting in high-quality nuclear protein extracts suitable for downstream applications.

Fig 3. Western Blot analysis of cytoplasmic proteins fractions extracted using YamayBio BF7476 and Thermo 78833. Equal numbers of Expi293F cells ( $2 \times 10^6$ ) were processed according to each manufacturer's protocol. Cytosolic (C) and nuclear (N) fractions were analyzed using specific marker antibodies to evaluate extraction efficiency and cross-contamination. GAPDH was used as a cytosolic marker, and HSP60 as a mitochondrial marker to assess fraction purity.

