A Method and A Kit For Eluting One or More Protein From Page Gel

Proteomics plays a key role in the knowledge societies and this knowledge is rising by leaps and bounds within no time. Research in proteomics is the next logical step after genomics in understanding life processes at the molecular level. In the largest sense proteomics encompasses knowledge of the structure, function and expression of all proteins in the biochemical or biological contexts of all organisms.

Gel electrophoresis is an important methodology employed for protein analysis. It is often necessary to elute and recover proteins separated by sodium dodecyl sulfate polyacrylamide gel electrophoresis (SDS-PAGE). Researchers running protein gels currently face the problem for elution of protein for further identification and characterization.

The development of protein elution methods in the recent years has allowed structural analyses of proteins with microgram amounts of sample. Proteins are usually purified by a combination of chromatographic techniques such as ion-exchange, gel filtration, affinity, hydrophobic and reversed-phase chromatography. However, researchers often encounter the difficulty in purifying the protein of interest even by using varieties of modern HPLC techniques, especially when only a trace amount of the analyte protein is contained in a sample. In such a case, Polyacrylamide Gel Electrophoresis (PAGE) provides an invaluable method to isolate the required protein from crude protein samples. Owing to its high resolution and excellent reproducibility and the easy preparation of gels at desired polyacrylamide concentrations in the presence and absence of additives such as urea and SDS, PAGE is popularly and routinely used for determining the purities of peptides and proteins. The recovery of proteins from polyacrylamide gel after PAGE for the preparative purposes is therefore of increasing importance, especially for purifying proteins available in low abundance which are often the subject of research today.

With this kit, we provide a rapid, economic and efficient method for elution of one or more proteins from PAGE gel. Presently no kit is available, which can be used effectively and economically for the elution of protein from PAGE gel.

Advantages:

1. Higher recovery of protein including high molecular weight proteins without using devices.
2. less elution time.
3. Easy three step process for elution of protein from low Molecular Weight to high Molecular Weight.
4. This kit facilitates simultaneous elution of multiple samples
5. Eluted protein is enough for downstream sample processing such as conventional gel electrophoresis or proteomic studies
6. cost effective