

Technical Datasheet

Product Name: NexGen HM Phosphatase Inhibitor

Catalog Number: BPBOI033

Concentration: 100X

Introduction:

Endogenous proteins are produced and removed in a balanced state, so their cellular levels are generally stable under stable environmental conditions. However, protein degradation is enhanced when cells are studied *invitro*. To prevent the degradation of proteins under such conditions, one can utilize a cocktail of small molecule inhibitors to block the action of proteases. Phosphatase Inhibitor Cocktail (100× in ddH₂O) is a blend of 4 phosphatase inhibitors that can broadly inhibit acid phosphatases, alkaline phosphatases, serine-threonine and protein tyrosine phosphatases (PTPs). It is used to maintain the phosphorylation status of proteins. This product can be applied in Western Blot analysis, IP, Co-IP, pull-down, IF, IHC, Kinase assay and etc.

Product Description:

This product is specifically composed of a phosphatase inhibitor which is effective for acid phosphatase, protein tyrosine phosphatase, alkaline phosphatase, serine-threonine and tyrosine phosphatase.

Applications:

BioPioneer's NexGen HM Phosphatase inhibitor is versatile and suitable for a range of applications:

Protein Extraction: They are used during cell and tissue lysis to prevent the removal of phosphate groups from proteins, preserving the native phosphorylation state critical for proper protein function and analysis.

Immunoprecipitation: These inhibitors are essential in immunoprecipitation assays to maintain the phosphorylation of protein complexes, ensuring their structural and functional integrity during isolation.

Western Blotting: Phosphatase inhibitors are added in sample preparation to preserve phosphoproteins, enabling accurate detection of protein phosphorylation status in Western blot and related analytical techniques.

Composition:

Phosphatase inhibitor cocktails contain various compound such as sodium fluoride, sodium orthovanadate, sodium molybdate, and sodium pyrophosphate each of which targets and inhibits different classes of phosphatase enzymes.

Preparation Instructions:

The NexGen HM Phosphatase inhibitor is supplied as 100X solution. Dilution is required before use. For optimal results, the inhibitor should be used immediately upon preparation of tissue or cell samples.

Recommended buffer conditions:

- **Lysis buffer**
- **Radioimmunoprecipitation assay buffer (RIPA)** RIPA lysis buffer composition without DTT & beta-Mercaptoethanol.
- **NP-40 tissue lysis buffer** NP-40 buffer composition recommended without DTT & beta-Mercaptoethanol.
- **Phenol buffer** for plant protein extraction Phenol buffer composition recommended without DTT & beta-Mercaptoethanol.

Storage Conditions:

Store NexGen HM Phosphatase inhibitor at -20°C. Thawed properly before use.

Warning and Precautions:

Always wear protective gloves, clothing, eye protection, and face protection. Handle tissue samples and cell lysates with care to avoid cross-contamination. Adhere to good clinical laboratory practices when handling clinical samples, and follow standard precautions as outlined in established guidelines. For detailed safety procedures, go through the product's Safety Data Sheet.

Safety Information:

The NexGen HM Phosphatase inhibitor is intended solely for laboratory applications and not for human consumption. Always observe proper laboratory safety protocols. For details on hazards and safe handling procedures, go through the Safety Data Sheet (SDS).

Technical Assistance:

At BioPioneer, we are committed to providing top-notch technical support and ensuring its accessibility. For any technical assistance, please email us at qc@biopioneer.in.