PhosphoBLOCKER™ Blocking Reagent

CATALOG NUMBER: AKR-104 **STORAGE:** Room Temperature

QUANTITY AND CONCENTRATION: 200 g dry blend; 5% concentration after reconstitution in 4L

Background

Protein phosphorylation-dephosphorylation is one of the major signaling mechanisms for modulating the functional properties of proteins involved in gene expression, cell adhesion, cell cycle, cell proliferation, and differentiation. Proteins can be phosphorylated by protein kinases on specific serine, threonine, or tyrosine residues. The utilization of anti-phosphoprotein antibodies in western blotting has become a commonly used tool for signal transduction research. Unfortunately, low levels of endogenous phosphoprotein in various cell lysates often can not be detected, even with high concentrations of antibody and long exposure times. Most commercially available western blot blockers (e.g. dry milk, serum) are sufficient to block the unreacted sites on the membrane, reducing the amount of nonspecific antibody binding during the assay; however, they are not designed to preserve phosphoprotein antigens during blotting.

Cell Biolabs' PhosphoBLOCKER™ contains a proprietary formulation that provides several advantages over conventional blockers:

- Designed specifically for phosphoprotein blotting
- Enhances low level phosphoprotein signal without increasing background
- Premixed dry blend, easy to use

Methods

Freshly prepare 5% PhosphoBLOCKER™ solution in TBST or PBST. Use the 5% PhosphoBLOCKER™ solution to block the blot. When probing the blot, use the 5% PhosphoBLOCKER™ solution to dilute primary and secondary antibodies.

Note: Reconstituted PhosphoBLOCKER™ solution is only good for one week at 4ºC.

Example of results

The following figures demonstrate typical titration results. One should use the data below for reference only. This data should not be used to interpret actual results.

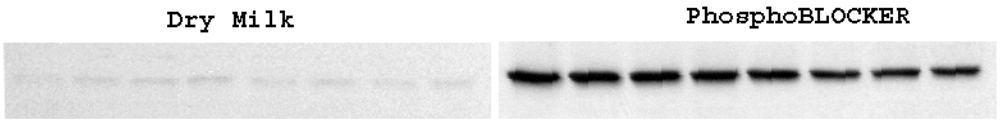

Figure 1. Western Blot of Phospho-p38 in A549 cell lysate.

Recent Product Citations

1. Martinez, P. et al. (2012). 53BP1 Deficiency Combined with Telomere Dysfunction Activates ATR-Dependent DNA Damage Response. *J.Cell.Biol.* **197**:283-300.
2. Kasuboski, J.M. et al. (2011). Zwint-1 is a Novel Aurora B Substrate Required for the Assembly of a Dynein-binding Platform on Kinetochores. *Mol. Biol. Cell.* **22**:3318-3330
3. Song, A. et al. (2010). A C. Elegans eIF4E-Family Member Upregulates Translation at Elevated Temperatures of MRNAs Encoding MSH-5 and Other Meiotic Crossover Proteins. *J. Cell Sci.* **123**:2228-2237.
4. Ishii, K. et al. (2010). Insect Cytokine Paralytic Peptide (PP) Induces Cellular and Humoral Immune Responses in the Silkworm *Bombyx mori. J. Biol. Chem*. **285**:28635-28642.
5. Ramakrishnan, R. et al. (2009). Characterization of Cdk9 T-loop Phosphorylation in Resting and Activated CD4+ T lymphocytes. *J. Leukoc. Biol.* **86**:1345-1350.

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This product is for RESEARCH USE ONLY; not for use in diagnostic procedures.

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