

# PhosphoBLOCKER™ Blocking Reagent

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**CATALOG NUMBER:** AKR-103

**STORAGE:** Room Temperature

**QUANTITY AND CONCENTRATION:** 50 g dry blend; 5% concentration after reconstitution in 1L

## **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**

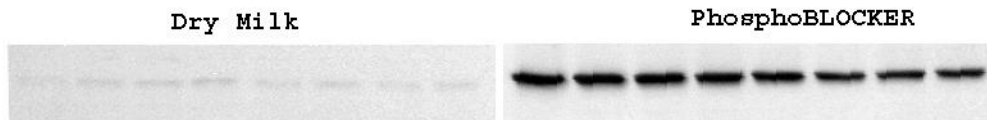
Freshly prepare 5% PhosphoBLOCKER™ solution in TBST or PBST. Use the 5% PhosphoBLOCKER™ solution to block the blot. When probing the blot, use the 5% PhosphoBLOCKER™ solution to dilute primary and secondary antibodies.

### *Notes:*

- *Reconstituted PhosphoBLOCKER™ solution is only good for one week at 4°C.*
- *The presence of dark-colored particles is a normal artifact of our manufacturing process and will not adversely affect the performance of the product. If desired, the particles may be removed following reconstitution by filtration using standard laboratory filter paper.*

## 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

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11. Tsuchiya, M. et al. (2021). Functional analysis of isoflavones using patient-derived human colonic organoids. *Biochem Biophys Res Commun.* **542**:40-47. doi: 10.1016/j.bbrc.2021.01.021.
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13. Okada, R. et al. (2021). Low magnetic field promotes recombinant human BMP-2-induced bone formation and influences orientation of trabeculae and bone marrow-derived stromal cells. *Bone Rep.* doi: 10.1016/j.bonr.2021.100757.
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### **Warranty**

These products are warranted to perform as described in their labeling and in Cell Biolabs literature when used in accordance with their instructions. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THIS EXPRESSED WARRANTY AND CELL BIOLABS DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY OR WARRANTY OF

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

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