

ClearBand Non-Fat Milk Powder

Troubleshooting Guide

250 g

Cat No: C1250

Use this guide for common blocking problems with ClearBand Non-Fat Milk Powder. The product is intended for Western blotting, ELISA, immunodetection, and related protein assays and is typically used at 3-5% (w/v) in buffers such as TBS, PBS, TBST, or PBST.

Before You Start - Quick Checks

1. Store at 2-8°C, keep the container tightly closed, and protect the powder from moisture.
2. Start with a 3-5% (w/v) blocking solution and optimize for the antibody/target system.
3. Prepare a homogeneous solution in the assay buffer used by the validated workflow.
4. Prepare blocking solution fresh when possible or follow a laboratory-validated storage procedure.

Problem	Most likely cause	Recommended action
High background after blocking	The blocking concentration or antibody-specific conditions may not be optimized.	Test within the typical 3-5% (w/v) range and optimize the blocking conditions for the antibody and target protein.
Target signal becomes weak after blocking	The selected blocking conditions may not be suitable for the target/antibody system.	Optimize milk concentration and blocking conditions rather than assuming one concentration is universal.
Milk solution contains clumps	The powder may have absorbed moisture or may not have been mixed completely.	Use dry powder from a tightly closed container and dissolve thoroughly in TBS, PBS, TBST, or PBST.
Prepared blocking solution is not homogeneous	The powder may have been added too quickly or mixing may be incomplete.	Add and mix until the solution is uniform before applying it to the membrane or plate.
Results differ after changing buffer	The blocking solution was prepared in a different aqueous buffer.	Use the same validated TBS/PBS/TBST/PBST formulation across experiments unless intentionally optimizing.
Powder has caked during storage	Moisture exposure may have occurred.	Protect the product from moisture, keep the container tightly closed, and store at 2-8°C.
Prepared solution was stored for an extended period	The datasheet recommends fresh preparation or storage according to laboratory validation.	Prepare fresh blocking solution or follow an established validated storage limit.
Blocking performance varies between antibodies	Optimization is target- and antibody-dependent.	Optimize milk concentration and blocking time separately for each antibody system when necessary.

Still having trouble? Recheck dry 2-8°C storage, moisture protection, a homogeneous 3-5% blocking solution, buffer choice, and antibody-specific optimization before changing wash or detection reagents.