

HisGold Power Blot

1-Step Detection Reagent for poly-Histidine tagged Proteins in Blot Assays

Gold nanoparticle based quantitative permanent stain with high sensitivity (≥ 0.1 pmol protein)

Catalog No.	Volume*	Formulation
CDS-84324	10 ml	ready to use
CDS-84325	30 ml	ready to use

* Reagent is designed for multiple reuse, generally at least for 3 incubations of mini blots in 10 ml.

Equipment Required

Incubation tray
 Lab shaker

Description

HisGold Power Blot is a ready-to-use reagent for the detection of poly-histidine tagged proteins in blot assays. This reagent is equally suitable for Western Blot assays and Dot or Slot Blot assays. The detection reagent is made from an optimized anti-histidine antibody¹ gold nanoparticle conjugate and is reactive against C- and anti-N terminal tags. The protein of interest is specifically stained in pink directly on the blot.

Instant detection of poly-histidine tagged proteins on nitrocellulose membrane with HisGold Power Blot is easy and does not require relevant hands on time. Even 0.1 pmol detection limits can be achieved with this highly sensitive detection reagent. This is in the range of conventional ECL detection.

HisGold Power Blot solution can be reused as long as the signal after consecutive incubations is still satisfactorily strong. In general, at least 3 mini blots can be stained consecutively in 10 ml. The consumption of the poly-Histidine detection reagent depends on the total amount of His-tagged proteins on the membrane.

Procedure

- 1.) Electroblothing is performed according to established standard procedures: protein from SDS-PAGE is transferred onto Nitrocellulose (NC) or Polyvinylidene fluoride PVDF membrane. Alternatively fractions from cell extracts or column purification are spotted onto a suitable membrane.
- 2.) Rinse membrane with plain tap water to remove remaining detergent and place the membrane into a clean incubation tray of suitable size.
- 3.) Pour the HisGold Power Blot ready-to-use reagent onto the membrane to cover it completely and incubate 60 - 90 min on a suitable lab shaker
Note: No blocking, additional washing, or antibody incubation steps are required.
- 4.) His-tagged fusion proteins become visible due to antibody induced gold nanoparticle accumulation. When the staining is satisfactorily strong, the excess reagent is removed by rinsing the membrane with tap water.
- 5.) The membrane can be dried with filter paper and archived or scanned. There is no detection equipment required. The detection signal is visible by the human eye and may be quantified by spectroscopic or photo-technical equipment. The intensity of the band is proportional to the amount of protein present, thus quantification can be easily achieved with a standard spotted next to the sample.

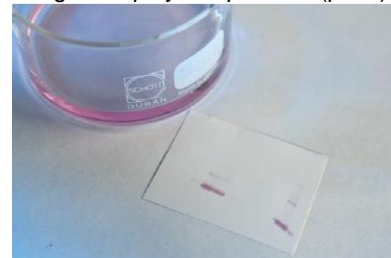
1. Insert membrane into the reagent



2. Incubate 60 - 90 minutes



3. Signal of poly-His proteins (pmol)



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Storage and Stability

HisGold Power Blot should be stored at room temperature, preferably at 16 - 25°C. Freezing should be avoided. Originally sealed, the shelf life is 12 months. After opening the reagent is stable for 3 months.

Quality Control

The reagent is manufactured under strict quality control ensuring constantly high products standard. To protect the product from contamination all components are sterilized.

Troubleshooting

No signal

HisGold Power Blot reagent faded, as it is reused, contaminated or frozen

- Use fresh HisGold Power Blot reagent and a clean tray

No/not sufficient poly-his tagged protein present on the membrane

- Increase incubation time, increase protein amount, use fresh protein, add a control line or check the sequence for frame-shift or stop codon incidence

Too much background

Long incubation may result in detection of degraded protein or natural multi his proteins

- Use less protein and/or shorten incubation time.

Limitations and Warranty

This product is warranted to perform substantially in conformance with published product specifications and to be free from defects in material and workmanship. The product is supplied for research use only. The warranty provided herein is valid only when used by properly trained individuals. This warranty is limited to half a year from date of shipment. The products warranty is limited to replacement of the non-conforming product.

Material Safety Instructions

The reagent contains 0.05% w/v sodium azide. This hazardous component requires no declaration below 0.1%. The antibody and gold nanoparticle concentration is below declaration boundary.

However, as nanoparticles influence on the body is not fully understood exposure should be thoroughly avoided. Especially vapour and aerosol generation should be avoided to avoid inhalation. Direct skin and mucosal contact should be circumvented.

Accidental spillage should be absorbed with inert material and transferred to suitable container for disposal. Special local disposal regulations should be respected.

When working with these or any chemical reagents, using gloves, lab coats, and eye protection is recommended. Dianova GmbH assumes no liability for damage resulting from handling or contact with these products.

(Material Safety Data Sheet upon request)

For Research Use Only

¹ HisGold Power Blot contains the QIAGEN Penta-His Antibody which is covered by patents exclusively licensed to QIAGEN GmbH, QIAGEN Strasse 1, 40724 Hilden, Germany.