

XpressCheck HA Tag test strip

HA Tag is one of the most common epitope tags used to produce recombinant proteins. It comes from the hemagglutinin protein of the human influenza virus, with the peptide sequence of YPYDVPDYA. HA tag is widely used to help identify and purify recombinant proteins.

The XpressCheck HA Tag test strip is a competitive lateral flow assay-based technique for the rapid detection of HA tagged proteins. The assay has a simple procedure and can be completed within 3 minutes without any instrument. The strip can be applied directly to unpurified samples in cell lysis buffer or cell culture medium (with or without PBS). It is also compatible with samples in water or different buffers such as PBS, Tris, or HEPES etc.

The test strip can be used to qualitatively detect the expression of HA tagged proteins. With serial diluted samples the assay can also be carried out in a semi-quantitative manner to determine the concentration of the HA tagged protein. It is an ideal tool for protein expression evaluation, optimization and colony selection. The detection limit of the strip is about 0.2 μM , corresponding to 10 $\mu\text{g/mL}$ for a protein with a molecular weight of 50 kDa.

XpressCheck is a patent pending technique with improved sensitivity, compatibility, ease of use and shelf-life compared to traditional lateral flow products.

Contents and Storage


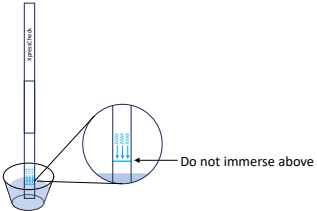
CATALOG NUMBER	UNIT	STORAGE
XC-HA-25	25	Room temperature Keep dry
XC-HA-100	100	Room temperature Keep dry

Precautions

- There 2 lines on the strip – control line C and test line T. The C line is the upper line and about 37 mm from the strip bottom. The T line is the lower line and about 32 mm from strip bottom.
- Reading results after more than 15 minutes is not recommended.
- The detection limit of 0.2 μM corresponds to 10 $\mu\text{g/mL}$ for a protein with a molecular weight of 50 kDa. The strip sensitivity could vary with different proteins.
- For more accurate quantification, a pre-evaluation of the strip on standard samples with known concentrations of the same protein is recommended.

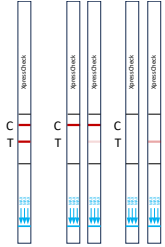
Test Procedure

Rapid HA tag detection

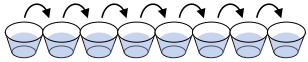
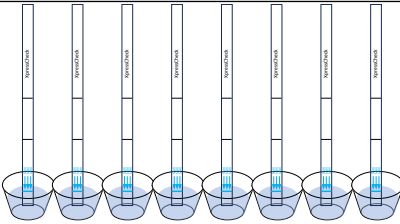
Step	Description	Illustration
1	Add 100 μL sample to a well (e.g. a well of a 96-well plate) or a vial. (Dilute the sample with water or a buffer (e.g. PBS) if desired.)	
2	Put the test strip into the vial, with the arrow label side immersed in the sample.	

Continue on the back side

Continue from the front side

Step	Description	Illustration
3	Wait until the control line (C) shows up, usually within 3 minutes	
4	<p>Read result</p> <p>Negative: Both control (C) and test (T) lines are clear. The test line intensity is about equal to or stronger than the control line.</p> <p>Positive: The test line (T) intensity is much weaker than the control line (C), or only the control line (C) is visible.</p> <p>Invalid: No Control line (C) is visible.</p>	 <p>Negative Positive Invalid</p>

Semi-quantitative HA tagged protein measurement

Step	Description	Illustration
1	<p>Make serial diluted samples, 100 μL each.</p> <p>(For unknown samples, it is recommended to start with a 10\times serial dilution.)</p>	
2	Put the test strips into the wells, with the arrow label sides immersed in the samples.	
3	Wait until the control lines show up, usually within 3 minutes	
4	<p>Read result</p> <p>The last sample showing a positive result (arrow pointed) corresponds to about 0.2 μM HA tagged protein.</p>	