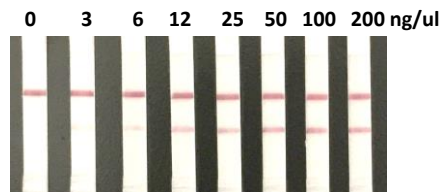


The 37ExpressVue™ Rapid Tests for Fc fusion proteins, including rFc, hFc, mFc, are series of immuno-chromatographic assays for the qualitative detection of antibodies or recombinant proteins tagged with rabbit Fc (rFc), human (hFc) or mouse Fc (mFc) in cell cultures or lysates. Detection of expressed recombinant proteins using gel electrophoresis/Western Blotting or ELISA methods are time consuming and requires skilled handling. The 37ExpressVue™ Fc Test detect Fc tagged protein directly from cell culture media or lysate without any special instruments or sample handling. The test is completed in 5 to 10 minutes.

The 37ExpressVue™ Rapid Tests allow researchers to (1) monitor protein expression in real-time; (2) determine dose response of inducer in protein expression; (3) monitor change of protein expression levels in response to environmental conditions, such as temperature, nutrient or oxygen level...

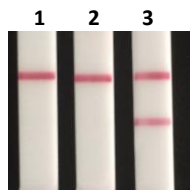
Here we present some sample applications of the 37ExpressVue™ Rapid Tests, and testing results under various experimental conditions.

Sensitivity: The analytical sensitivity of this test is ~ng/ml



Human IgG was diluted from 3ng/ml to 200ng/ml in PBS and detected with human Fc test strips.

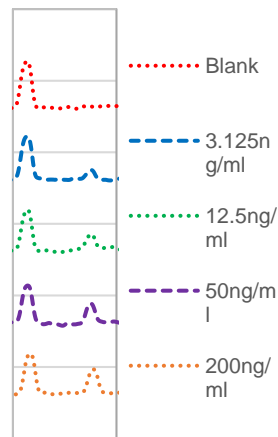
Specificity: At the concentration of 100 ng/ml, the hFc strip doesn't cross react with rFc or mFc



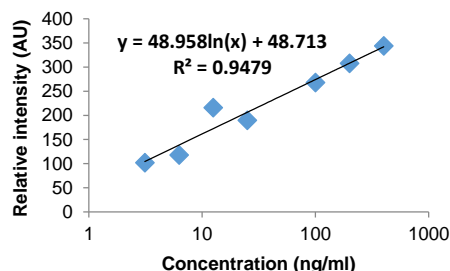
Cross reaction with mouse IgG and rabbit IgG was tested with the human Fc test strips. Strip 1, mouse IgG; strip 2, Rabbit IgG; Strip 3, Human IgG. 100ng/ml of each antibody was tested with the human Fc test strips. There are no cross reaction at 100ng/ml concentration.

Potential for semi-quantification

Relative Intensity of Control (C) and Test (T) Line



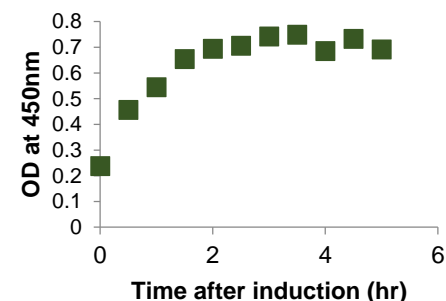
Colloidal gold labeled human Fc Test strips scanned with a Qiagen ESEquant reader after reaction.



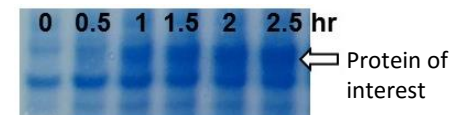
Plot of relative intensities of test lines against the analyte concentrations.

Real time monitoring of rFc tagged protein expression in *E. coli* culture by ELISA, SDS-PAGE and Rapid Tests

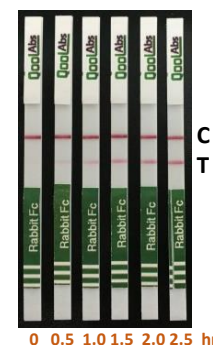
ELISA



SDS-PAGE



Test Strips



In addition to normal physiological conditions such as in PBS buffer with neutral pH, the Fc rapid tests can also be used under some extreme conditions, such as:

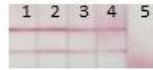
- 1M NaCl,
- 1 M urea,
- pH 7.0 -9.0 with 100mM buffer strength,
- pH 2-9 of 10mM buffer strength (not shown),
- 1% TritonX100,
- 0.5% chaps,
- <0.5% sarkosyl,
- 10% BSA,
- 10% FBS,
- 5 mM EDTA.

Tested conditions not suitable:

- 10% milk
- >3M NaCl
- >0.1% SDS
- >2M urea
- 1M guanidine

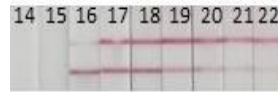


Effect of NaCl



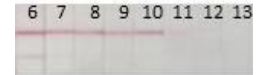
solution	Relative reading
1. PBS+0.1M NaCl	2
2. PBS+0.5M NaCl	2
3. PBS+1M NaCl	1.5
4. PBS+2M NaCl	0.5
5. PBS+3M NaCl	0

Effect of pH



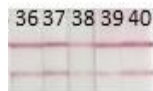
solution	Relative reading	solution	Relative reading
14. 0.1M glycine, pH 2	0	19. 0.1M Tris, pH 7	2
15. 0.1M glycine, pH 3	0	20. 0.1M Tris, pH 8	2
16. 0.1M HAC, pH 4	3	21. 0.1M Tris, pH 9	1.5
17. 0.1M HAC, pH 5	3	22. 0.1M K ₂ CO ₃ , pH 10	0.5
18. 0.1M MES, pH 6	3		

Effect of Denaturant



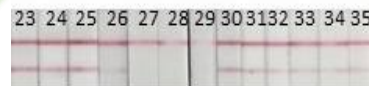
solution	Relative reading	solution	Relative reading
6. PBS+1M urea	2	10. PBS+1M guanidine	0.5
7. PBS+2M urea	0.5	11. PBS+2M guanidine	0
8. PBS+3M urea	0	12. PBS+3M guanidine	0
9. PBS+4M urea	0	13. PBS+4M guanidine	0

Effect of Other Reagents



Solution	Relative reading
36. PBS+10% FBS	2
37. PBS+10% BSA	2
38. PBS+10% milk	0.75
39. PBS+ 5 mM EDTA	1.5
40. PBS	2

Effect of Detergents



solution	Relative reading	solution	Relative reading
23. PBS+0.1% TritonX100	1	30. PBS+0.1% chaps	2
24. PBS+0.5% TritonX100	1	31. PBS+0.5% chaps	2
25. PBS+1% TritonX100	2	32. PBS+1% chaps	1.5
26. PBS+0.1% SDS	0.75	33. PBS+0.1% sarkosyl	1.5
27. PBS+0.5% SDS	0	34. PBS+0.5% sarkosyl	1
28. PBS+1% SDS	0	35. PBS+1% sarkosyl	0.75
29. PBS+2% SDS	0		

Suitable for Different Formats

