RT-QuIC for CWD and other prions

Standardized reagents for consistent results
Minimizes variability between individuals or labs
Little optimization required

Reagents are ready-to-use
No filtration or centrifugation required
Less handling leads to less opportunity for human error
Saves time

Maximal sensitivity with minimal spontaneous protein conversion
Sensitive detection in many sample types
Reduces risk of false positives

Test Performance

Inter-laboratory reproducibility
Two-year study using rectal biopsy samples from elk

Excellent agreement among 5 participating laboratories performing RT-QuIC

<table>
<thead>
<tr>
<th></th>
<th># samples</th>
<th>Kappa</th>
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<tbody>
<tr>
<td>Year 1</td>
<td>387</td>
<td>0.92</td>
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<tr>
<td>Year 2</td>
<td>315</td>
<td>0.89</td>
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Early antemortem detection of CWD prions

RT-QuIC and IHC performed on serial biopsies from experimentally infected white-tailed deer

CWD prions detected an average of 4 months earlier in tonsil biopsies and 3.7 months earlier in rectal biopsies with RT-QuIC

All deer with positive RT-QuIC results became IHC-positive

Other features

- Same homogenization techniques as ELISA
- Removal of normal prion protein not required
- Ability to test sample types not feasible with IHC
- Can be used on formalin-fixed tissue

Learn more at vmrd.com/cwd-rt-quic-reagents
RT-QuIC Amplification Reagent
CATALOG #: RTQUIC-CWD-AR
Store at -80°C
- Contains 1.25 mL per tube (enough for half of a 96-well plate)
- Composed of Syrian Hamster recombinant PrPc amino acids 90-231
- Shown to effectively identify abnormal prion proteins associated with numerous diseases in multiple species, including CWD, scrapie, BSE, FSE, vCJD, and sCJD

5x RT-QuIC Reaction Buffer
CATALOG #: RTQUIC-CWD-RB
Store at -20°C
- Contains 1 mL per tube (enough for half of a 96-well plate)
- Composed of 5x PBS pH 7.4, 1.6 M NaCl, 5 nM EDTA, and 50 µM thioflavin T
- Prefiltered and ready to use

10x Sample Dilution Buffer
CATALOG #: RTQUIC-CWD-DB
Store at -20°C prior to dilution and at room temperature after dilution to 1x
- Contains 1 mL per tube
- Composed of 1x PBS +1.0% SDS
- Must be diluted 10-fold with reagent-grade water before use
- Used after sample homogenization to obtain the final dilution of sample for an optimal RT-QuIC reaction.

Recommended Sample Dilutions:

- **Brain**: 10^4
- **Lymph node**: 10^3
- **RAMAL T tissue**: 10^2
- **Other tissues or organs**: 10^2 to 10^3
- **Feces, urine, and saliva**: Concentration methods should be used for effective prion recovery. 4,5
- **CSF**: See literature for optimal SDS concentration and dilution. 6,7

References