

NEW



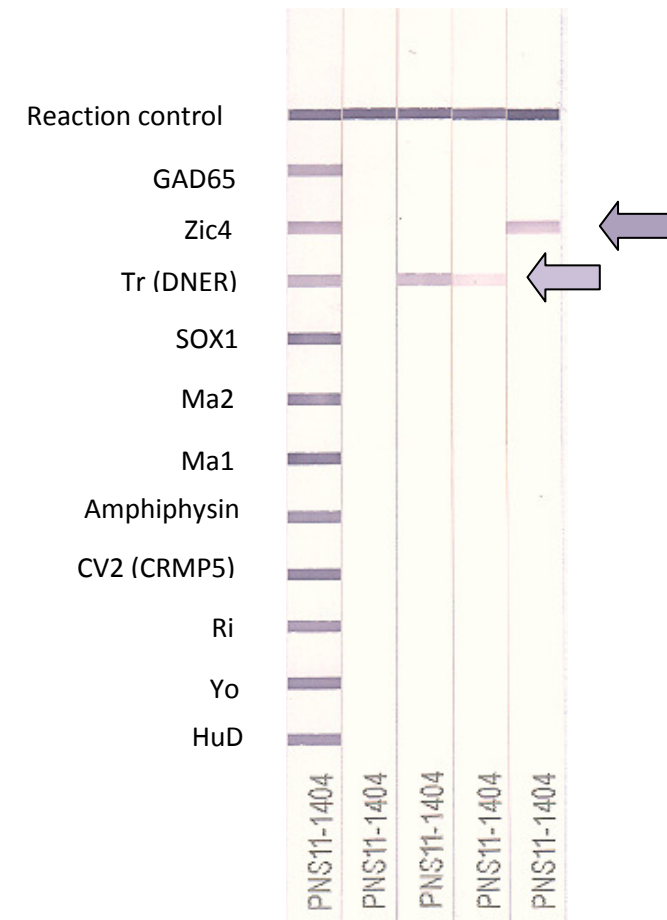
## RAVO PNS 11 Line Assay with Tr (DNER) and Zic4



Oltmannsstrasse 5  
D-79100 Freiburg  
Telefon: +49 (0)761 40 74 88  
Fax: +49 (0)761 40 74 77  
E-Mail: [info@ravo.de](mailto:info@ravo.de)  
Internet: [www.ravo.de](http://www.ravo.de)

### References:

1. Esther de Graaff, Peter Maat, Esther Hulsenboom, Robert van den Berg, Martin van den Bent, Jeroen Demmers, Pieternella J. Lugtenburg, Casper C. Hoogenraad and Peter Sillevs-Smith. Identification of Delta/Notch-like Epidermal Growth Factor-Related Receptor as the Tr Antigen in Paraneoplastic Cerebellar Degeneration. ANN NEUROL 2012;71:815-824
2. L. Bataller, D.F. Wade, F. Graus, H.D. Stacy, M.R. Rosenfeld, J. Dalmau. Antibodies to Zic4 in paraneoplastic neurologic disorders and small-cell lung cancer. Neurology 2004;62:778-782



# ravo PNS 11 Line Assay

The ravo blot for the detection of the well characterized autoantibodies anti-HuD, anti-Yo, anti-Ri, anti-CV2/CRMP5, anti-Amphiphysin, anti-Ma1, anti-Ma2, anti-SOX1 and anti-GAD65 has been improved by the addition of **Tr- (DNER-)** and **Zic4**. Although both autoantibodies are very rarely detected they play an important role to confine a paraneoplastic etiology in so far unexplained neurological diseases.

**Tr (DNER):** Autoantibodies to the so-called Tr antigen associated with Hodgkin Lymphoma are known as marker for a paraneoplastic subacute cerebellar degeneration. So far these autoantibodies have been identified by IFA by their typical staining pattern of Purkinje cells. Recently it has been shown that DNER (Delta/Notch-like Epidermal Growth Factor-Related Receptor) is the underlying Tr antigen (1).

**Zic4:** Autoantibodies to Zic4 are associated with paraneoplastic cerebellar degeneration and the underlying tumor is often a small cell lung cancer. Antibodies to HuD and CV2 (CRMP5) and to lesser extent to Ri are also detected in patients with paraneoplastic disorders and antibodies to Zic4. The frequency of Zic4 antibodies in SCLC without paraneoplastic disorders is 16% (2).

## Advantages of the new PNS 11 Line Assay:

- Detection of 11 important neurological autoantibodies on one strip using one serum dilution
- Serum sample dilution 1:200
- Sample incubation reduced to 30 minutes

## Order Form

Please complete and return by FAX to ravo Diagnostika: +49 - 0761 - 40 74 77

Name /Institution:

Customer:

Address:

Phone/Fax:

Please tick a box:

- Yes, I would like to try the new PNS 11 Line Assay.  
Please send an individual quotation for one package size of my choice.
- PNS 11-001 ( 8 determinations)
- PNS 11-002 (16 determinations)
- PNS 11-003 (24 determinations)

Date/Signature \_\_\_\_\_