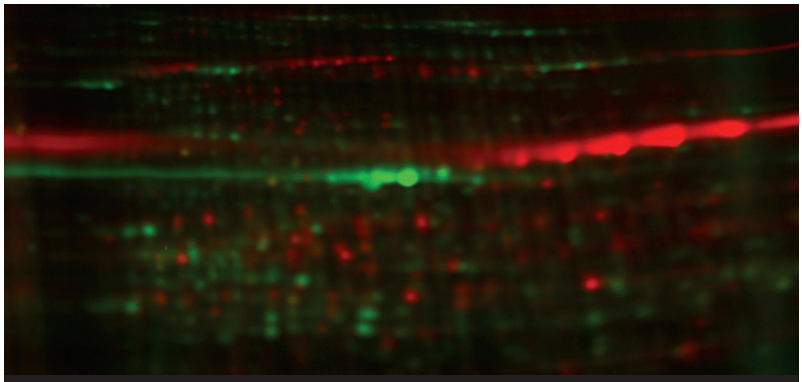
NH DyeAGNOSTICS

NEW PRODUCT RELEASE

Saturn-2D™ REDOX

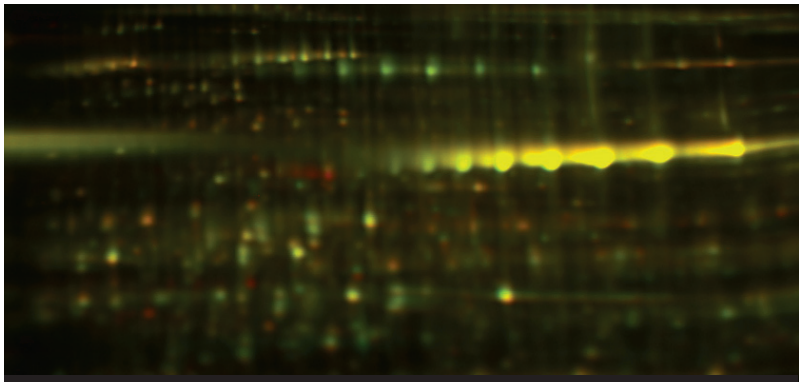
Stress response at a glance

Stress response is manifested in multiple shifts in the proteome by oxidation of Cys residues. The new Saturn-2D™ REDOX protein labeling kit perfectly illustrates changes within the complex redox interaction network. Due to specially designed Cys-interacting compounds (CinC) differences in the redox status can be easily displayed, leading to dramatic time savings for further mass spec analysis.



REDOX protein analysis without CinC-technology

Fig 1. 2D gel analysis using traditional multiplex-fluorescence labeling kits. Unequal binding of dyes to Cys-residues to reduced and oxidized proteins leads to inconsistent spot matching.



REDOX protein analysis with new CinC-technology

Fig. 2. 2D gel analysis using CinC-technology. Proteins differing in their REDOX status show perfect spot matching. Differences in the REDOX potential are displayed in changes of fluorescence intensities.

100% Made in Germany

Saturn-2D™ REDOX

Perfect spot matching with CinC™-technology

Saturn-2D™ REDOX is a novel technology for the simple visualization of complex stress response of the cellular proteome. Samples differing in their REDOX potential are specifically labeled and then compared. The existing problem of inconsistent spot matching - unequal binding of fluorescent dyes to proteins differing in their REDOX potential - is solved by a special Cys-interacting compound (CinC).

The comparison of two protein samples (e.g. unstressed vs. stressed) requires four 2D gels (plus replicates), whereas one sample and the internal standard (IS) are analyzed within one 2D gel. The IS consists of a mixture of all protein samples of the experiment. This allows easy gel-to-gel-comparison. A dye swap is not required for Saturn-2D™ REDOX analysis.

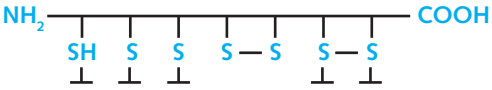
For optimal results we recommend to label each sample directly and non-directly. The direct labeling approach displays the reduced Cysteines of proteins of the sample, whereas the non-direct approach shows all oxidized Cysteines. For further technical information please refer to our detailed Saturn-2D™ REDOX **Product Guide**.

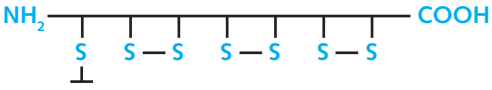
Using CinC™-technology (e.g. non-direct approach)

Protein A (unstressed)

Protein B (stressed)

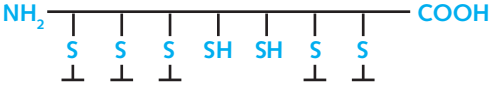
1. Blocking of reduced Cysteines by Cys-interacting compound (CinC)



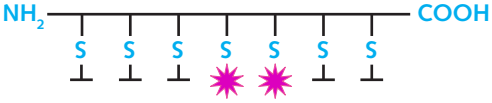


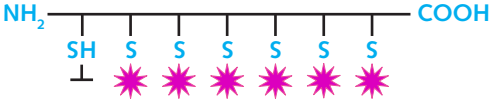
2. Removal of excessive Cys-interacting compound (CinC)

3. Reduction of oxidized Cysteines



4. Labeling of oxidized Cysteins with S-Dyes





Saturn-2D™ REDOX

Kit content

- S-Dye200 – high performance fluorescence dye
- S-Dye300 – high performance fluorescence dye
- S-Dye solvent
- S-Dye low retention tips
- S-Dye low retention tubes
- Cys-interacting compound (CinC)
- Cys-interacting compound solvent
- Chromatography columns
- Chromatography matrix
- Redox labeling buffer
- Redox stop solution
- ddH_2O, sterile
- TCEP

Product & ordering information

Prod. No.	Description	Kit size	Price
PR34	Saturn-2D™ REDOX Protein Labeling Kit	8S	980.00 €
PR35	Saturn-2D™ REDOX Protein Labeling Kit	12S	1,380.00 €

For further information please contact

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