

# Selected Publications List: Total Protein Normalization in Western Blotting Using Stain-Free Technology



V3 Western Workflow™

Bulletin 6351

As of December 2016, there are nearly 400 scientific publications that took advantage of the V3 Western Workflow. Researchers are increasingly discovering the utility, convenience, and reliability of this workflow that utilizes stain-free gel and blot imaging technology to enable total protein normalization, a technique for reporting semi-quantitative western blot results preferred by journals such as the *Journal of Biological Chemistry*. Below is a selection of research articles that highlight the advantages of the V3 Western Workflow.

## Selected Publications



Click icon to read online article.

### **Bass JJ et al. (2017).**

An overview of technical considerations for western blotting applications to physiological research.  
Scand J Med Sci Sports 27, 4–25.



### **Zeitler AF et al. (2016).**

Optimized semi-quantitative blot analysis in infection assays using the stain-free technology.  
J Microbiol Methods 126, 38–41.



### **Tramutola A et al. (2016).**

Activation of p53 in Down Syndrome and in the Ts65Dn mouse brain is associated with a pro-apoptotic phenotype.  
J Alzheimers Dis 52, 359–371.



### **Vigelsø A et al. (2015).**

GAPDH and  $\beta$ -actin protein decreases with aging, making stain-free technology a superior loading control in western blotting of human skeletal muscle.  
J Appl Physiol 118, 386–394.



### **Collins MA et al. (2015).**

Total protein is an effective loading control for cerebrospinal fluid western blots.  
J Neurosci Methods 251, 72–82.

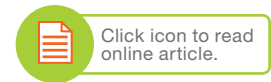


### **Rivero-Gutiérrez B. et al. (2014).**

Stain-free detection as loading control alternative to Ponceau and housekeeping protein immunodetection in western blotting.  
Anal Biochem 467, 1–3.



**BIO-RAD**



**Gilda JE and Gomes AV (2013).**

Stain-free total protein staining is a superior loading control to  $\beta$ -actin for western blots.  
Anal Biochem 440, 186–188.



**Hammond M et al. (2013).**

A method for greater reliability in western blot loading controls: stain-free total protein quantitation.  
Bio-Rad Bulletin 6360.



**Taylor SC et al. (2013).**

A defined methodology for reliable quantification of western blot data.  
Mol Biotechnol 55, 217–226.



**Li R and Shen Y (2013).**

An old method facing a new challenge: re-visiting housekeeping proteins as internal reference control for neuroscience research.  
Life Sci 92, 747–751.



**Posch A et al. (2013).**

V3 stain-free workflow for a practical, convenient, and reliable total protein loading control in western blotting.  
J Vis Exp 82, e50948.



**Gürtler A et al. (2013).**

Stain-free technology as a normalization tool in western blot analysis.  
Anal Biochem 433, 105–111.



**Colella AD et al. (2012).**

Comparison of stain-free gels with traditional immunoblot loading control methodology.  
Anal Biochem 430, 108–110.



Visit [bio-rad.com/V3info](http://bio-rad.com/V3info) for more information about total protein normalization and the V3 Western Workflow.



**Bio-Rad  
Laboratories, Inc.**

Life Science  
Group

**Web site** [bio-rad.com](http://bio-rad.com) **USA** 1 800 424 6723 **Australia** 61 2 9914 2800 **Austria** 43 1 877 89 01 177 **Belgium** 32 (0)3 710 53 00 **Brazil** 55 11 3065 7550  
**Canada** 1 905 364 3435 **China** 86 21 6169 8500 **Czech Republic** 420 241 430 532 **Denmark** 45 44 52 10 00 **Finland** 358 09 804 22 00  
**France** 33 01 47 95 69 65 **Germany** 49 89 31 884 0 **Hong Kong** 852 2789 3300 **Hungary** 36 1 459 6100 **India** 91 124 4029300  
**Israel** 972 03 963 6050 **Italy** 39 02 216091 **Japan** 81 3 6361 7000 **Korea** 82 2 3473 4460 **Mexico** 52 555 488 7670 **The Netherlands** 31 (0)318 540 666  
**New Zealand** 64 9 415 2280 **Norway** 47 23 38 41 30 **Poland** 48 22 331 99 99 **Portugal** 351 21 472 7700 **Russia** 7 495 721 14 04  
**Singapore** 65 6415 3188 **South Africa** 27 (0) 861 246 723 **Spain** 34 91 590 5200 **Sweden** 46 08 555 12700 **Switzerland** 41 026674 55 05  
**Taiwan** 886 2 2578 7189 **Thailand** 66 2 651 8311 **United Arab Emirates** 971 4 8187300 **United Kingdom** 44 020 8328 2000

