

Ketamine's antidepressant effect is mediated by energy metabolism and antioxidant defense system

Weckmann Katja^{1,+}; Deery Mike²; Howard Julie²; Feret Renata²; Asara John M³; Dethloff Frederik¹; Filiou Michaela D⁴; Iannace Jamie¹; Labermaier Christiana¹; Maccarrone Giuseppina¹; Webhofer Christian¹; Teplytska Larysa¹; Lilley Kathryn²; Müller Marianne⁵; Turck Christoph W^{1*}

¹*Max Planck Institute of Psychiatry, Department of Translational Research in Psychiatry, Munich, Germany;*

²*Cambridge Centre for Proteomics, Cambridge System Biology Centre, University of Cambridge, Cambridge, UK;*

³*Division of Signal Transduction, Beth Israel Deaconess Medical Center and Department of Medicine, Harvard Medical School, Boston, USA;*

⁴*Max Planck Institute of Psychiatry, Department of Stress Neurobiology and Neurogenetics, Munich, Germany*

⁵*Experimental Psychiatry, Department of Psychiatry and Psychotherapy & Focus Program Translational Neuroscience, Johannes Gutenberg University Medical Center, Mainz, Germany*

^{*}*Present address: Institute of Pathobiochemistry, Johannes Gutenberg University, Medical School, Mainz, Germany*

***Corresponding author:**

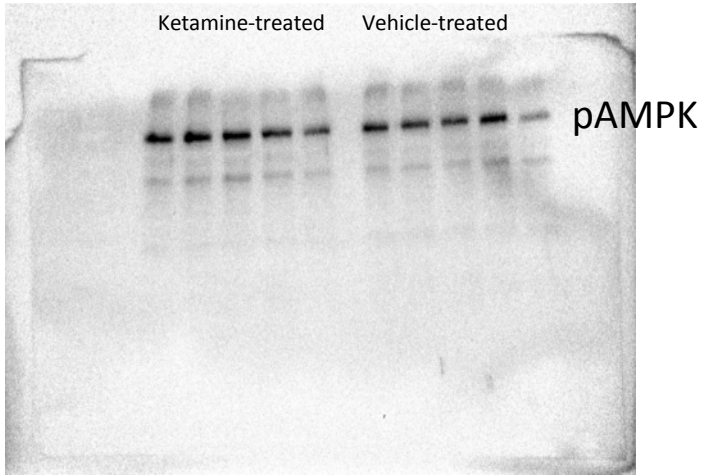
Prof. Dr. Christoph W. Turck

Max Planck Institute of Psychiatry, Department of Translational Research in Psychiatry, Kraepelinstrasse 2-10, 80804 Munich, Germany

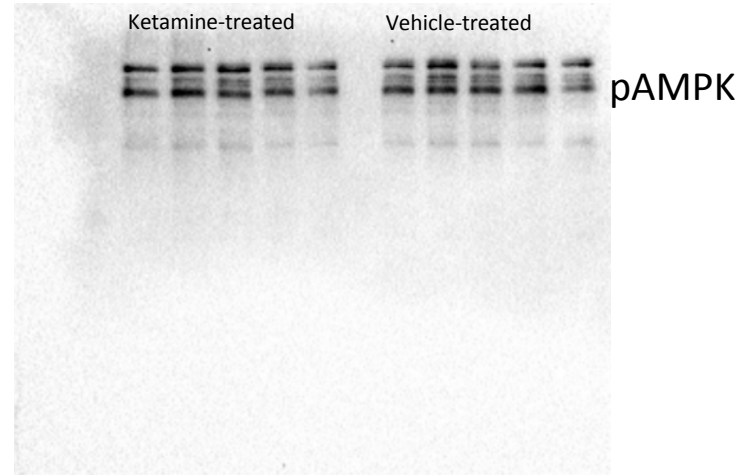
Phone: +49-89-30622317

E-mail: turck@psych.mpg.de

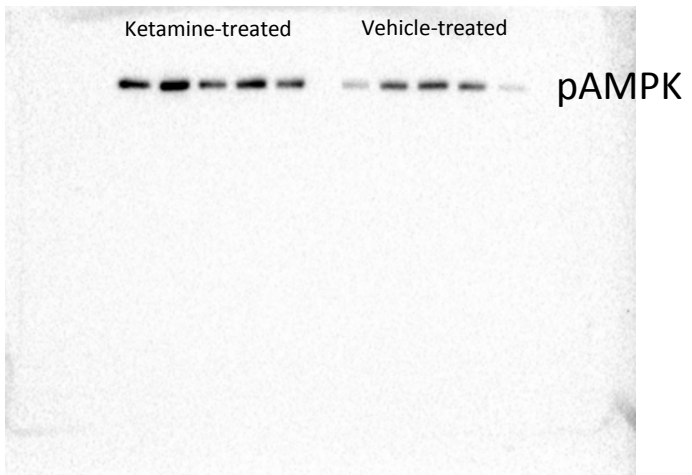
2h



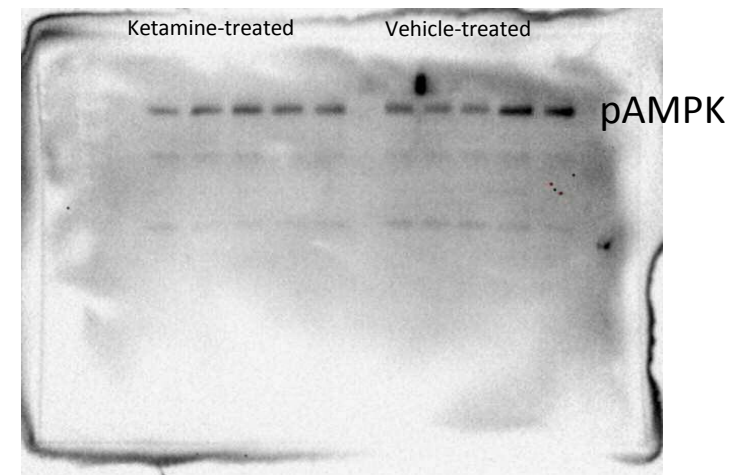
14h



24h

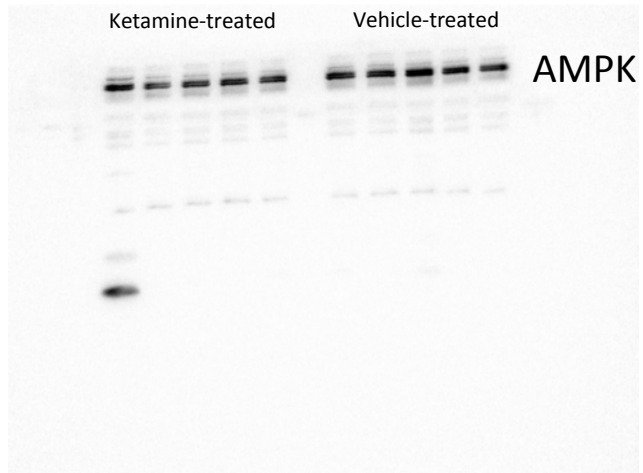


72h

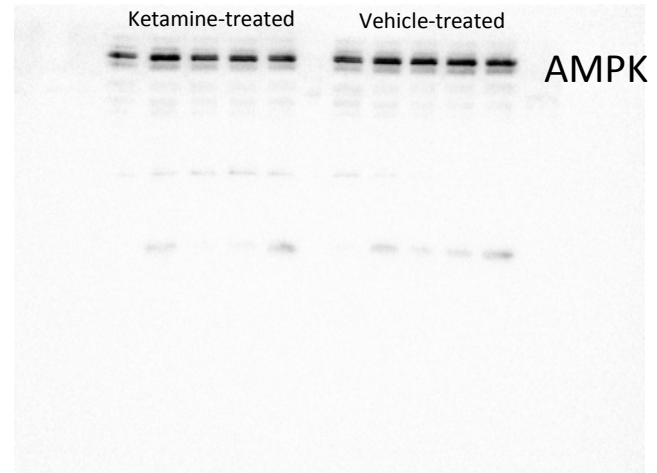


Supplemental figure 1A: Time-dependent Western blot analysis of AMP-activated protein kinase (AMPK). N=5 mice per group and time point.

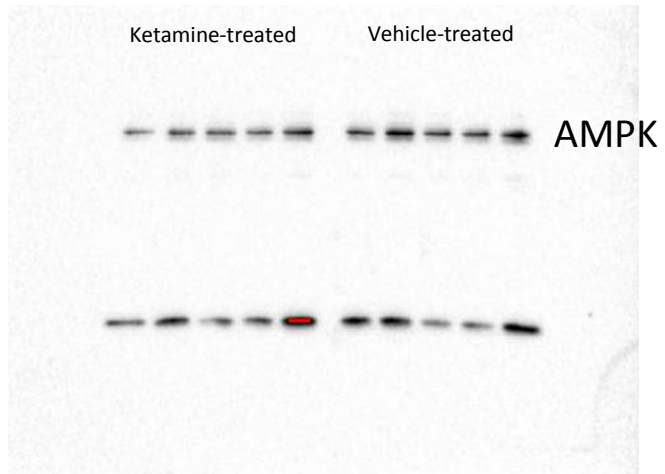
2h



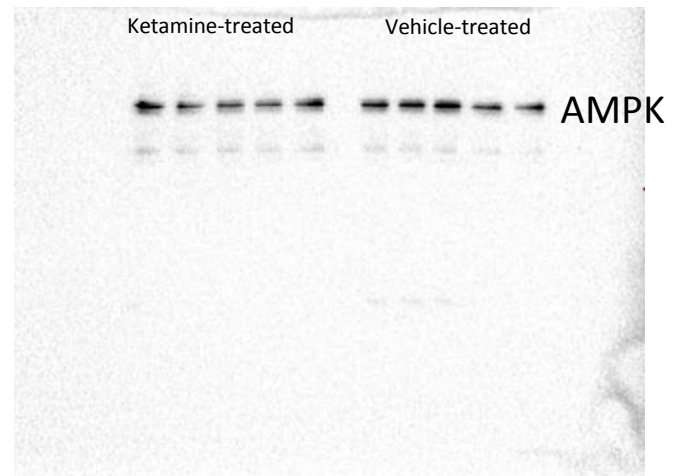
14h



24h

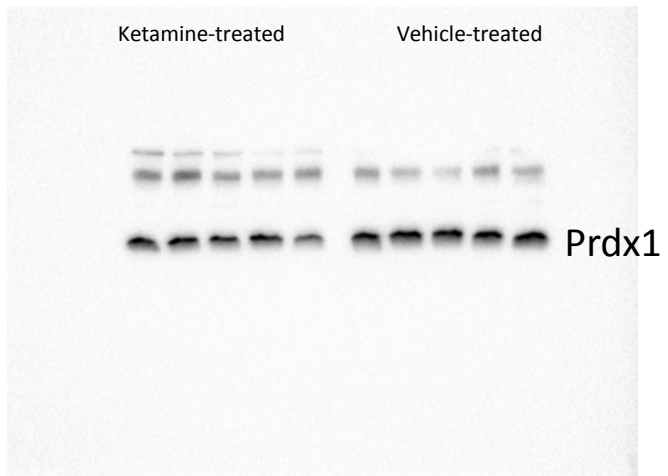


72h

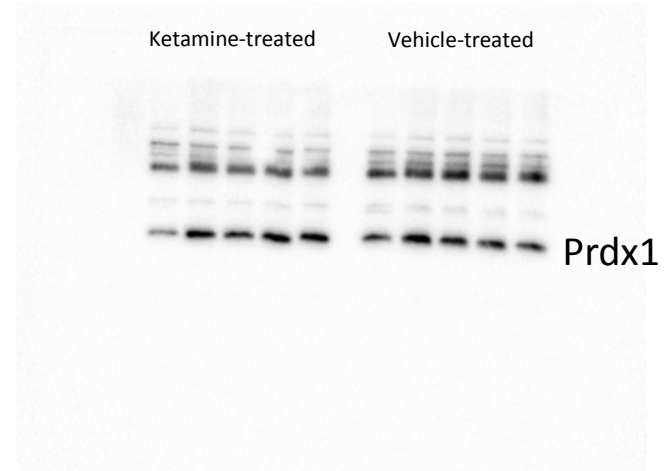


Supplemental figure 1B: Time-dependent Western blot analysis of phosphorylated AMP-activated protein kinase (pAMPK). N=5 mice per group and time point.

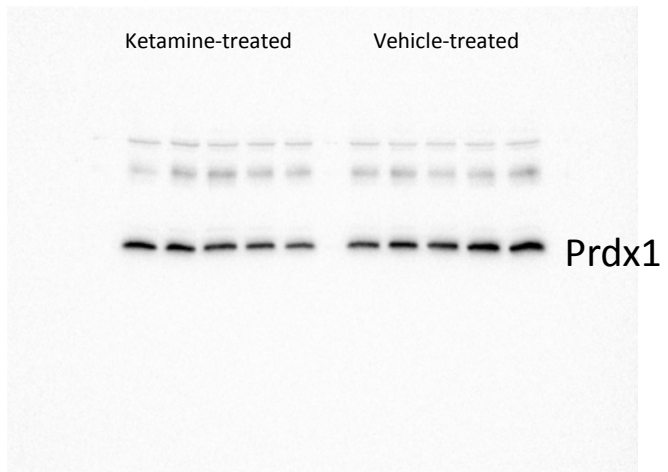
2h



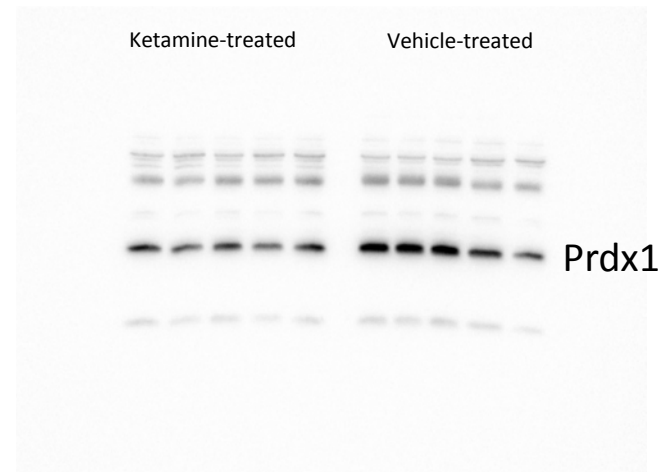
14h



24h

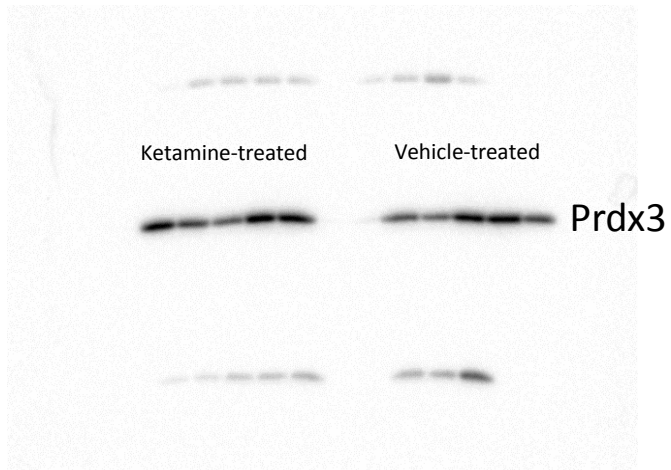


72h

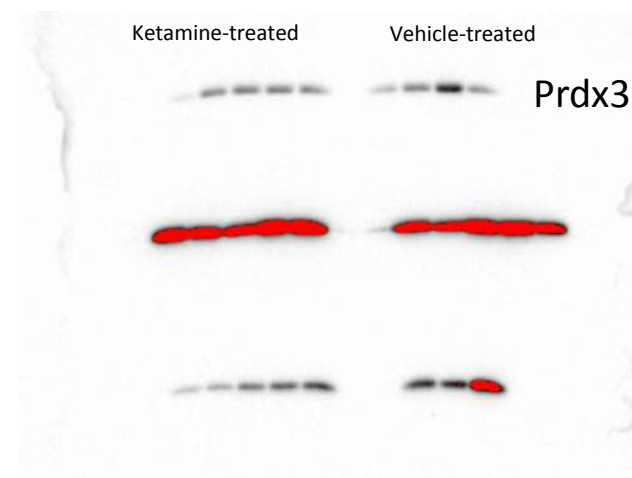


Supplemental figure 1C: Time-dependent Western blot analysis of Peroxiredoxin (Prdx) 1. N=5 mice per group and time point.

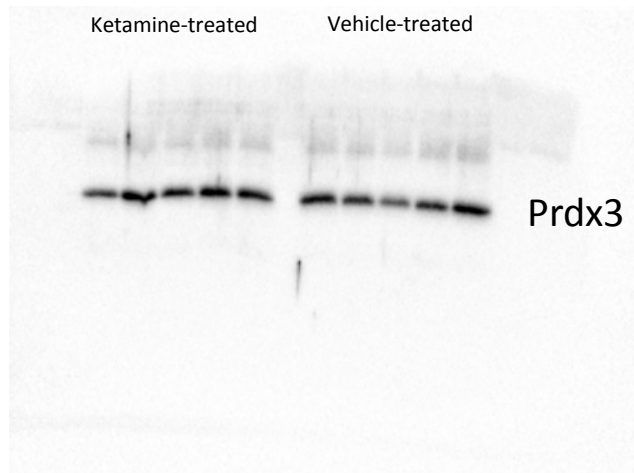
2h



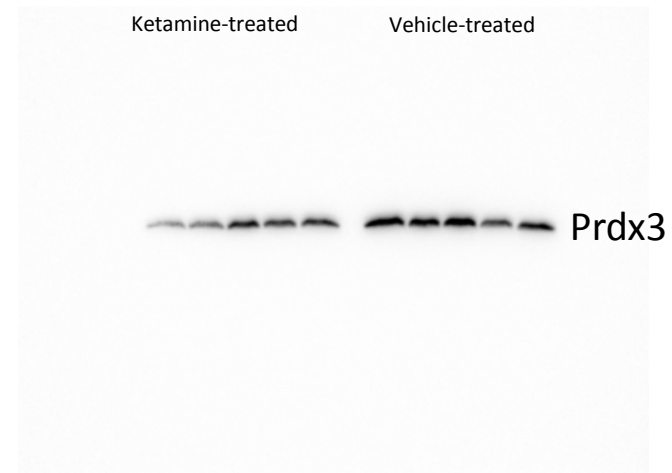
14h



24h



72h



Supplemental figure 1D: Time-dependent Western blot analysis of Peroxiredoxin (Prdx) 3. Blots were cut at the respective band size of Prdx3 and considered for the 2h and 14h time point. N=5 mice per group at the 2h, 24h and 72h time point, n=5 for ketamine-treated and n=4 for vehicle-treated at the 14h time point.