High-resolution respirometry and cancer

CellPress
Molecular Cell
Article

Mitochondrial MDM2 Regulates Respiratory Complex I Activity Independently of p53

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mt*MDM2* depletion in cancer cells increase NADH-linked OXPHOS respiration

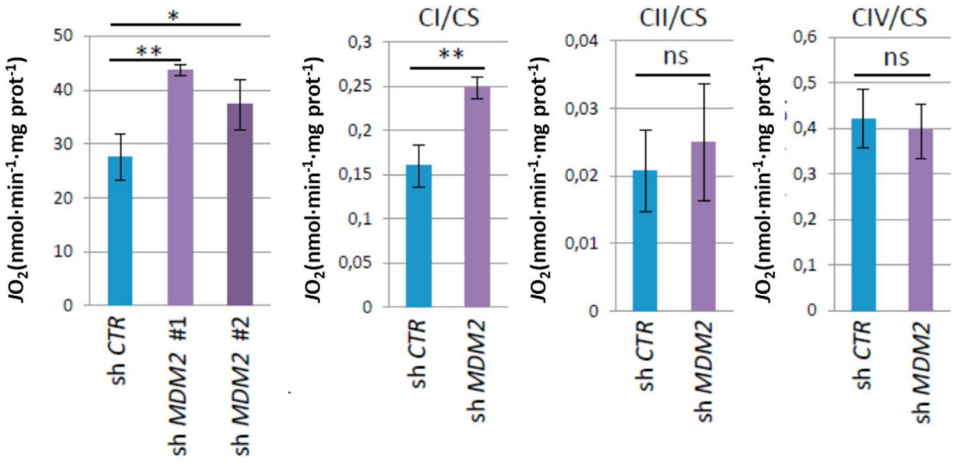

Figure 1. NADH-linked pathway OXPHOS capacity. Lung cancer cells H1299 were transduced with lentiviruses encoding control or two independent *MDM2* shRNAs **(a)** NADH-linked was fuel with glutamine, malate and pyruvate **(b)** Complex IV activity, NADH- and succinate pathways were assessed for the control exerted by MDM2 over respiration. Mean ± SEM, n=3.

MDM2 localization regulates NADH-linked OXPHOS capacity

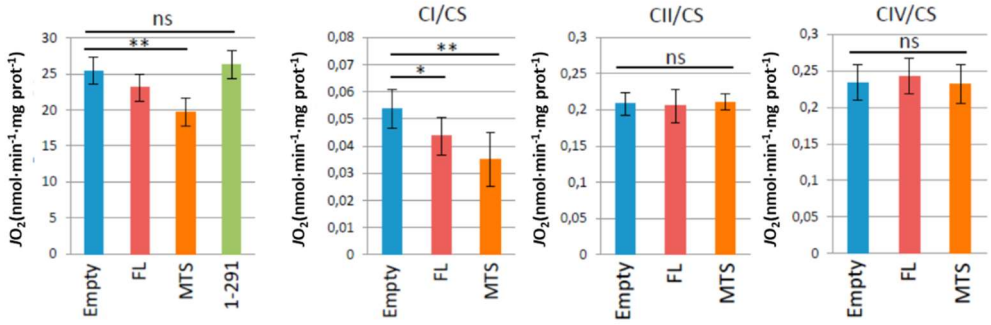

Figure 2. NADH-linked pathway OXPHOS capacity expressing different *MDM2* isoforms. H1299 cells expressing Flag full-length FL-MDM (FL), mitochondrial targeted MTS-MDM2 (MTS), cropped MDM2 1-292 (1-291) or cells transfected with an empty vector (Control). Mean ± SEM, n=3.

Reference: Arena G, Cissé MY, Pyrdziak S, Chatre L, Riscal R, Fuentes M, Arnold JJ, Kastner M, Gayte L, Bertrand-Gaday C, Nay K, Angebault-Prouteau C, Murray K, Chabi B, Koechlin-Ramonatxo C, Orsetti B, Vincent C, Casas F, Marine JC, Etienne-Manneville S, Bernex F, Lombès A, Cameron CE, Dubouchaud H, Ricchetti M, Linares LK, Le Cam L (2018) Mitochondrial MDM2 regulates respiratory complex I activity independently of p53. Mol Cell 69:594-609.

Figures and texts slightly modified based on the recommendations of the COST Action MitoEAGLE CA15203. doi:10.26124/mitofit:190001.v2