β-Tubulin

VENDOR: Cell Signaling Technology

Cat #: 2125

SIMPLE WESTERN CERTIFIED ANTIBODY DATASHEET

View Antibody Link

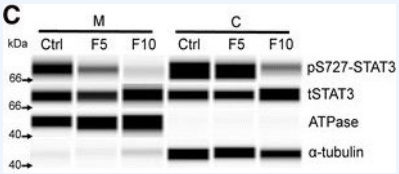

Figure 1: FAK inhibits mitochondrial S727-STAT3 phosphorylation. a A 4 h FAK14 treatment of bEnd5 cells reduced pS727-STAT3 in both the mitochondrial and cytoplasmic fractions. Blots are representative for 5 experiments. b This reduction was confirmed by quantitative capillary western blotting with representative chemiluminescent spectrograms and synthetic bands (c). d Quantitation was performed of spectrograms confirmed a clear and significant decrease in pS727-STAT3 following 4 h FAK14 treatment in the mitochondrial fractions (n = 3). e Treatment with another more lipophilic FAK antagonist (PF573228: PF at 10 or 20 μM) for 4 or 8 h showed decreases in pS727-STAT3 in conjunction with decreased pFAK in whole cell lysates. f Incubation with the global transcriptional inhibitor actinomycin D (0.3 μg/ml, 4 h) did not significantly change mitochondrial bioenergetics under control or FAK14 conditions

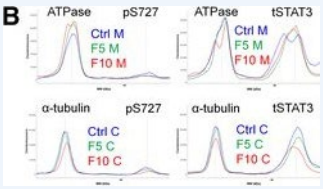

Figure 2: FAK inhibits mitochondrial S727-STAT3 phosphorylation. a A 4 h FAK14 treatment of bEnd5 cells reduced pS727-STAT3 in both the mitochondrial and cytoplasmic fractions. Blots are representative for 5 experiments. b This reduction was confirmed by quantitative capillary western blotting with representative chemiluminescent spectrograms and synthetic bands (c). d Quantitation was performed of spectrograms confirmed a clear and significant decrease in pS727-STAT3 following 4 h FAK14 treatment in the mitochondrial fractions (n = 3). e Treatment with another more lipophilic FAK antagonist (PF573228: PF at 10 or 20 μM) for 4 or 8 h showed decreases in pS727-STAT3 in conjunction with decreased pFAK in whole cell lysates. f Incubation with the global transcriptional inhibitor actinomycin D (0.3 μg/ml, 4 h) did not significantly change mitochondrial bioenergetics under control or FAK14 conditions

PROTEIN TARGET/ANTIBODY	
Protein Target	β-Tubulin
Protein Isoform	Unmodified
Antibody Type	Primary
Host Species/Clonality	Rabbit Monoclonal
ASSAY	
Sample Type	Brain
Sample Concentration	Not_Stated
Antibody Concentration/Dilution	1:2000
Antibody Diluent	
Detection Mode	Chemiluminescence
Separation Type	Size
Matrix	Not_Stated
Observed kDa	Not_Stated

PUBLICATIONS

1. Kohn, E. A., Yang, Y. A., et al. Biological responses to TGF-β in the mammary epithelium show a complex dependency on Smad3 gene dosage with important implications for tumor progression. Mol Cancer Res. 2012 Oct;10(10):1389-99. 10.1158/1541-7786.MCR-12-0136-T. PMID:22878587.
2. Daniels, V. W., Smans, K., et al. Cancer cells differentially activate and thrive on de novo lipid synthesis pathways in a low-lipid environment. PLoS One. 2014;9(9):e106913. 10.1371/JOURNAL.PONE.0106913. PMID:25215509.
3. Curtis, K. M., Aenlle, K. K., et al. TAp63γ and ΔNp63β promote osteoblastic differentiation of human mesenchymal stem cells: regulation by vitamin D3 Metabolites. PLoS One. 2015;10(4):e0123642. 10.1371/JOURNAL.PONE.0123642. PMID:25849854.
4. Guo, L., Eldridge, S., et al. Use of Human Induced Pluripotent Stem Cell-Derived Cardiomyocytes (hiPSC-CMs) to Monitor Compound Effects on Cardiac Myocyte Signaling Pathways. Curr Protoc Chem Biol. 2015 Sep 1;7(3):141-185. 10.1002/9780470559277.CH150035.
5. Van Rymenant, E., Abrankó, L., et al. Chronic exposure to short-chain fatty acids modulates transport and metabolism of microbiome-derived phenolics in human intestinal cells. J Nutr Biochem. 2017 Jan;39(NULL):156-168. 10.1016/J.JNUTBIO.2016.09.009. PMID:
6. Visavadiya, N. P., Keasey, M. P., et al. Integrin-FAK signaling rapidly and potently promotes mitochondrial function through STAT3. Cell Commun Signal. 2016 Dec 15;14(1):32. 10.1186/S12964-016-0157-7. PMID:27978828.
7. Tobias, I. S., Lazauskas, K. K., et al. Fiber type-specific analysis of AMPK isoforms in human skeletal muscle: advancement in methods via capillary nanoimmunoassay. J Appl Physiol (1985). 2018 Apr 1;124(4):840-849. 10.1152/JAPPLPHYSIOL.00894.2017. PMID:2
8. Jia, C., Keasey, M. P., et al. Vitronectin from brain pericytes promotes adult forebrain neurogenesis by stimulating CNTF. Exp Neurol. 2019 Feb;312(NULL):20-32. 10.1016/J.EXPNEUROL.2018.11.002. PMID:30408465.
9. Tobias, I. S., Lazauskas, K. K., et al. Sex and fiber type independently influence AMPK, TBC1D1, and TBC1D4 at rest and during recovery from high-intensity exercise in humans. J Appl Physiol (1985). 2020 Feb 1;128(2):350-361. 10.1152/JAPPLPHYSIOL.00704.20

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