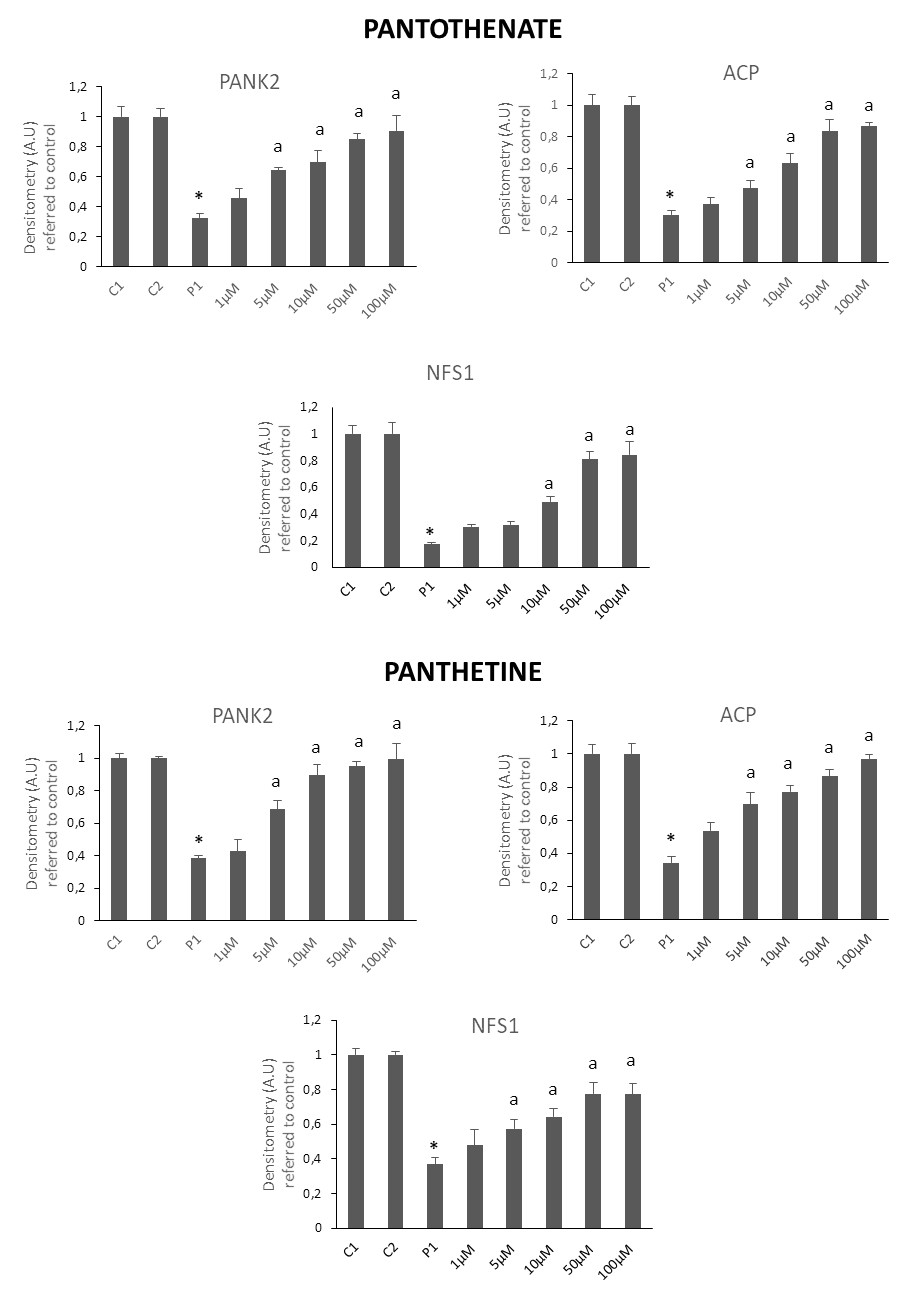
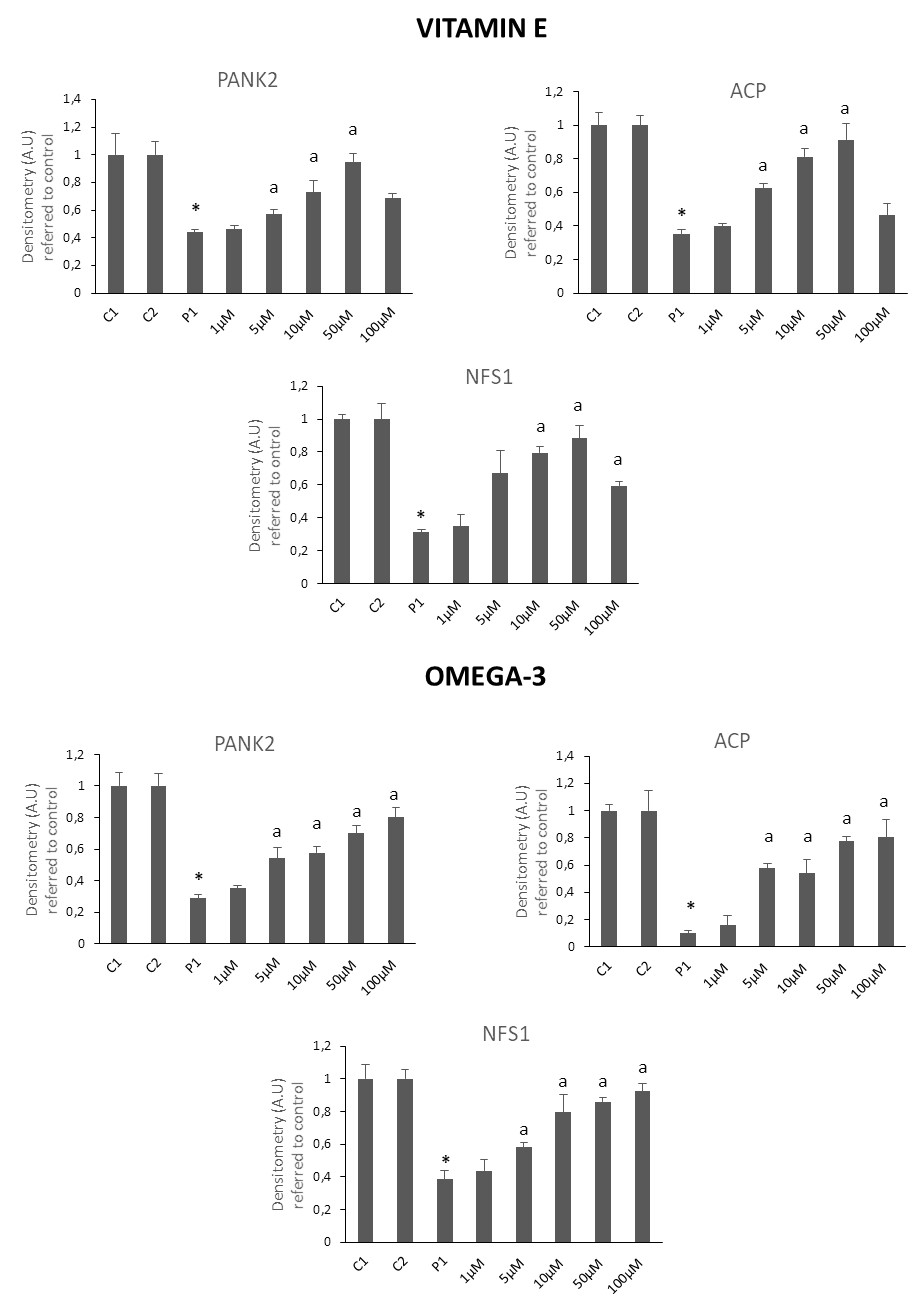
Supplementary Material

## Supplementary Figures



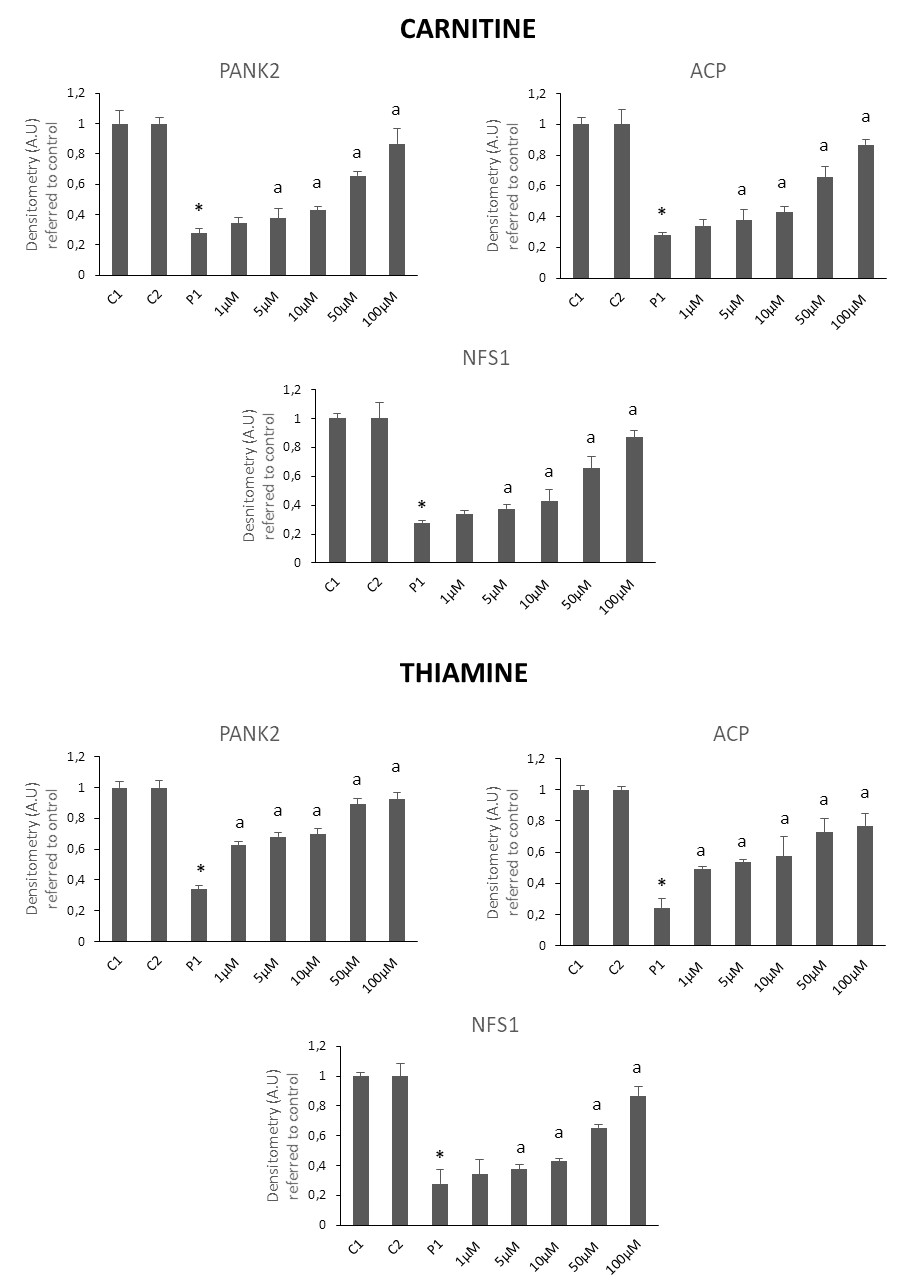
**Supplementary Figure 1.**

Densitometry Westerns Figure **3**. Data represent the mean±SD of three separate experiments. \*p<0.01 between PKAN patients and controls. ap<0.01 between untreated and treated fibroblasts. A.U., arbitrary units.

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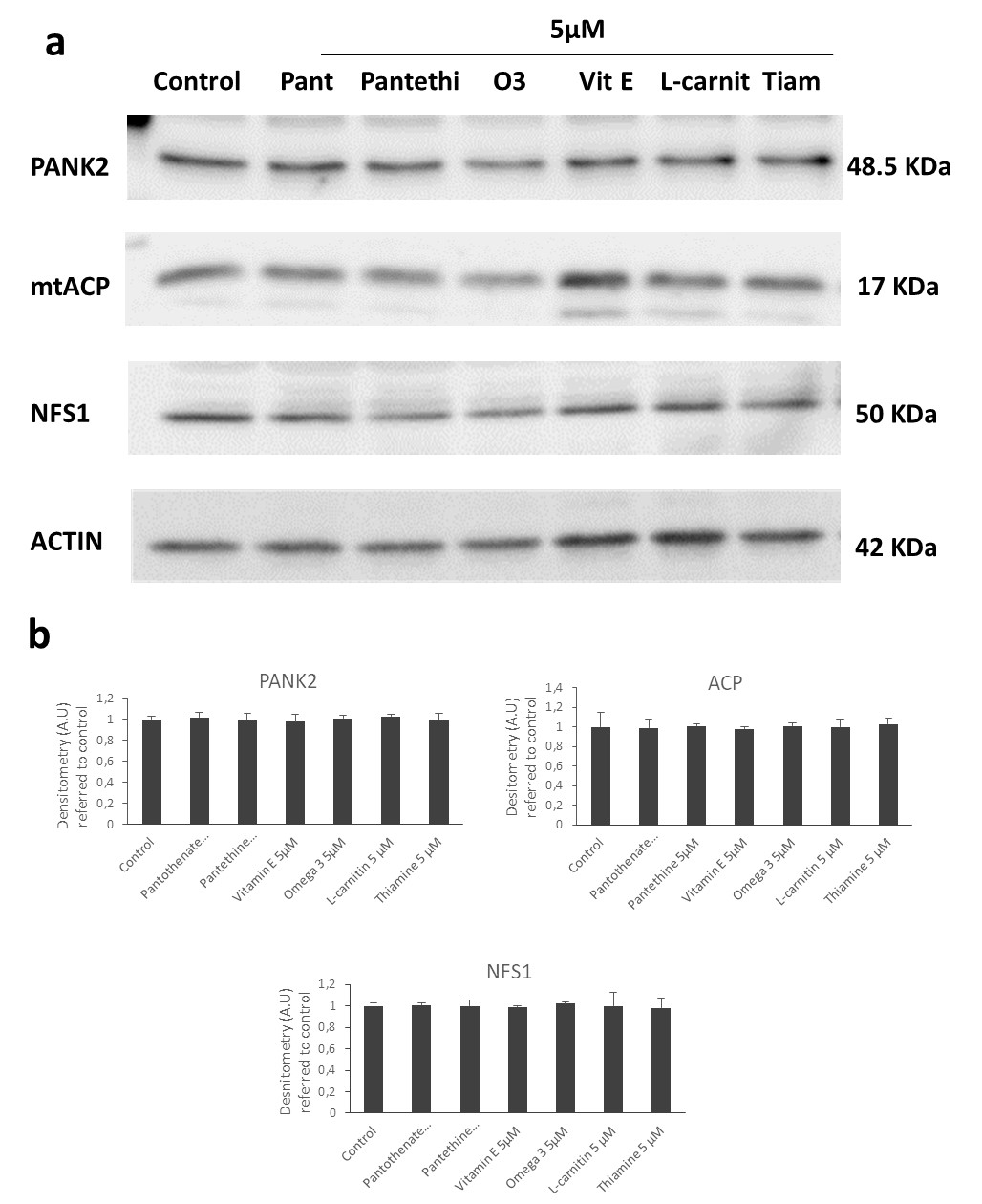
**Supplementary Figure 2.**

Densitometry Westerns Figure **4**. Data represent the mean±SD of three separate experiments. \*p<0.01 between PKAN patients and controls. ap<0.01 between untreated and treated fibroblasts. A.U., arbitrary units.



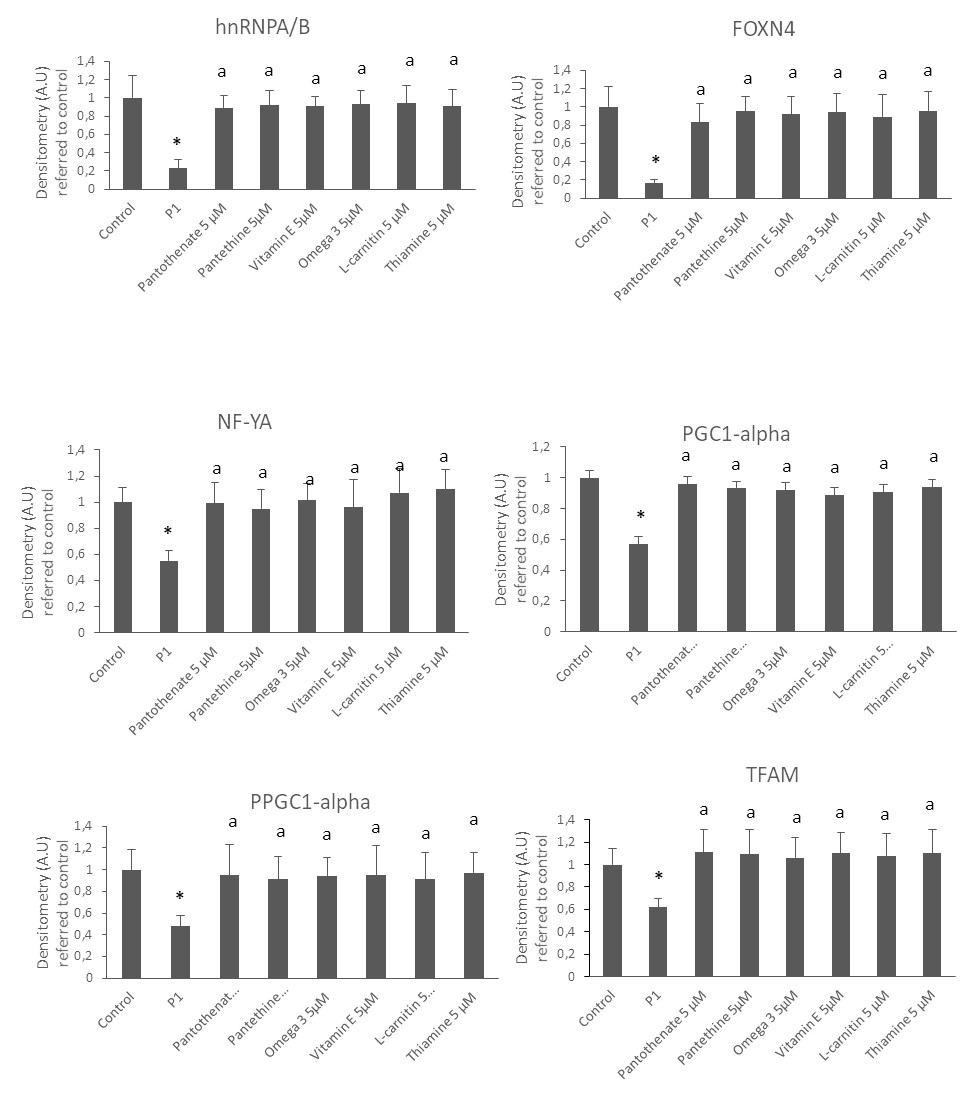
**Supplementary Figure 3.**

Densitometry Westerns Figure **5**. Data represent the mean±SD of three separate experiments. \*p<0.01 between PKAN patients and controls. ap<0.01 between untreated and treated fibroblasts. A.U., arbitrary units.

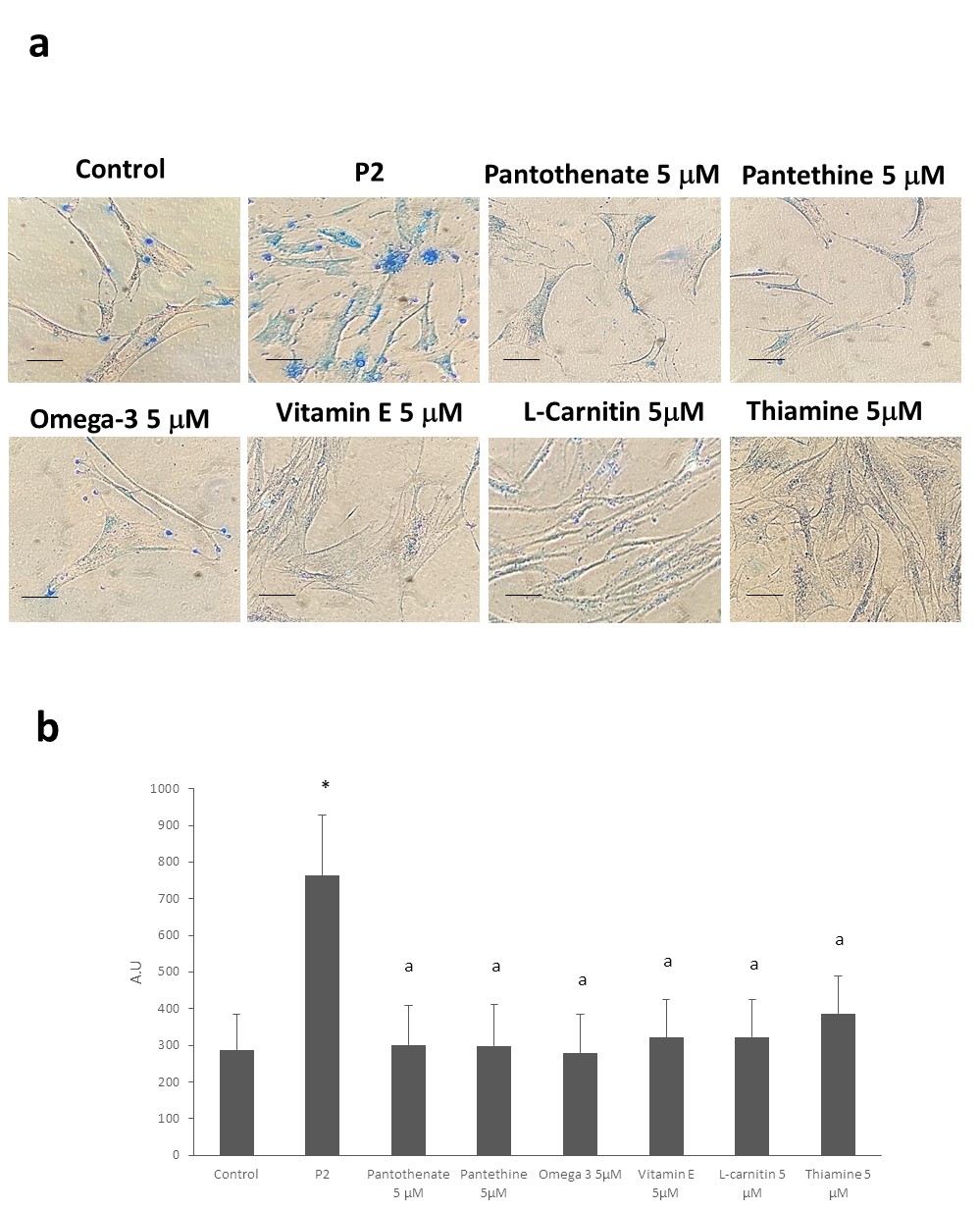
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**Supplementary Figure 4.**

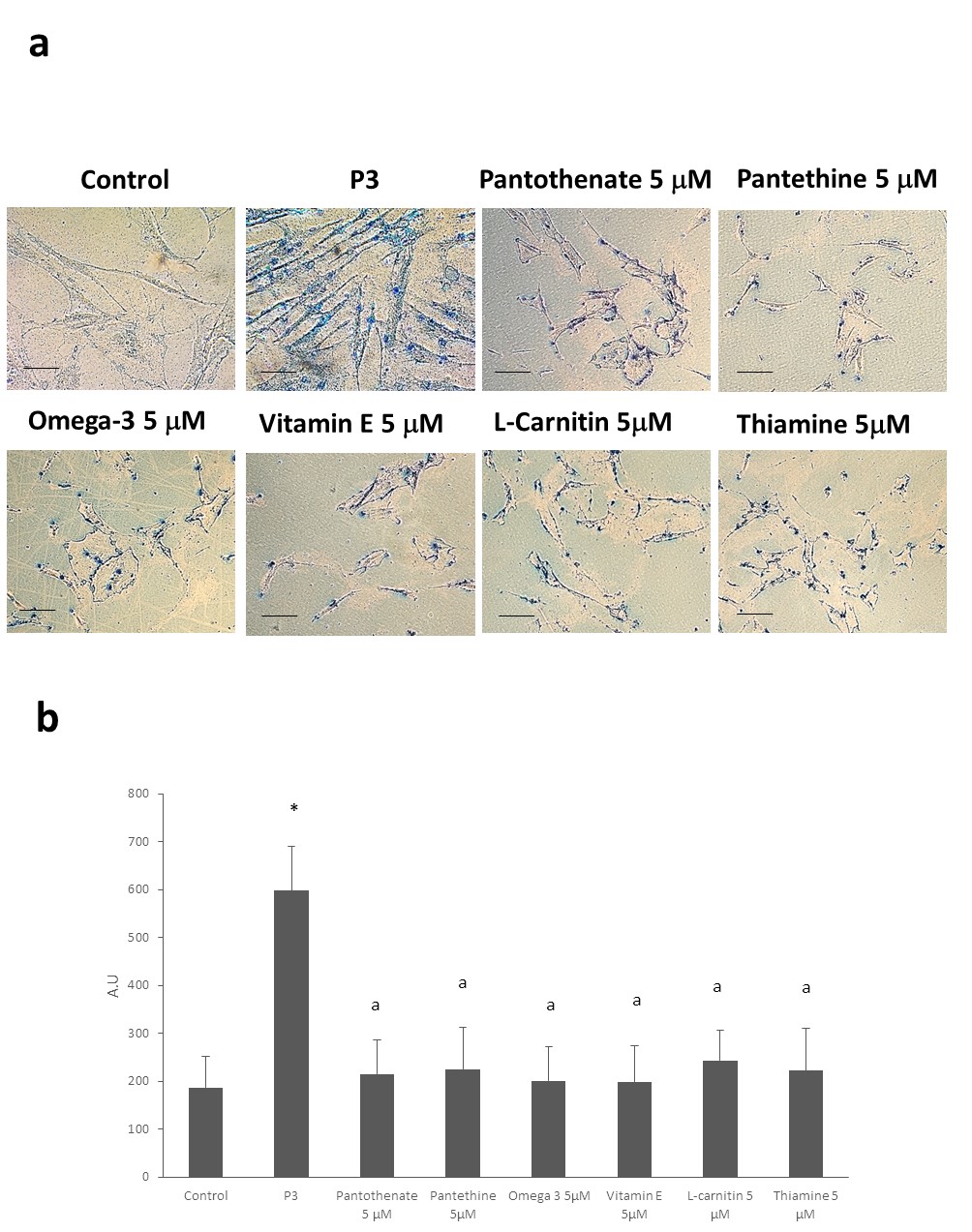
(**a**) Control cells were treated with pantothenate (Pant), pantethine (Pantethi), vitamin E (Vit E), omega 3 (O3), L-carnitine (L-carnit) or thiamine (Tiam) at 5 M for 20 days. Protein extracts (50 μg) were separated on a SDS polyacrylamide gel and immunostained with antibodies against PANK2, mtACP and NFS1. Actin was used as a loading control. (**b**). Densitometry of the Western blotting of PANK2. Data represent the mean±SD of three separate experiments. \*p<0.01 between PKAN patients and controls. ap<0.01 between untreated and treated fibroblasts. A.U., arbitrary units.



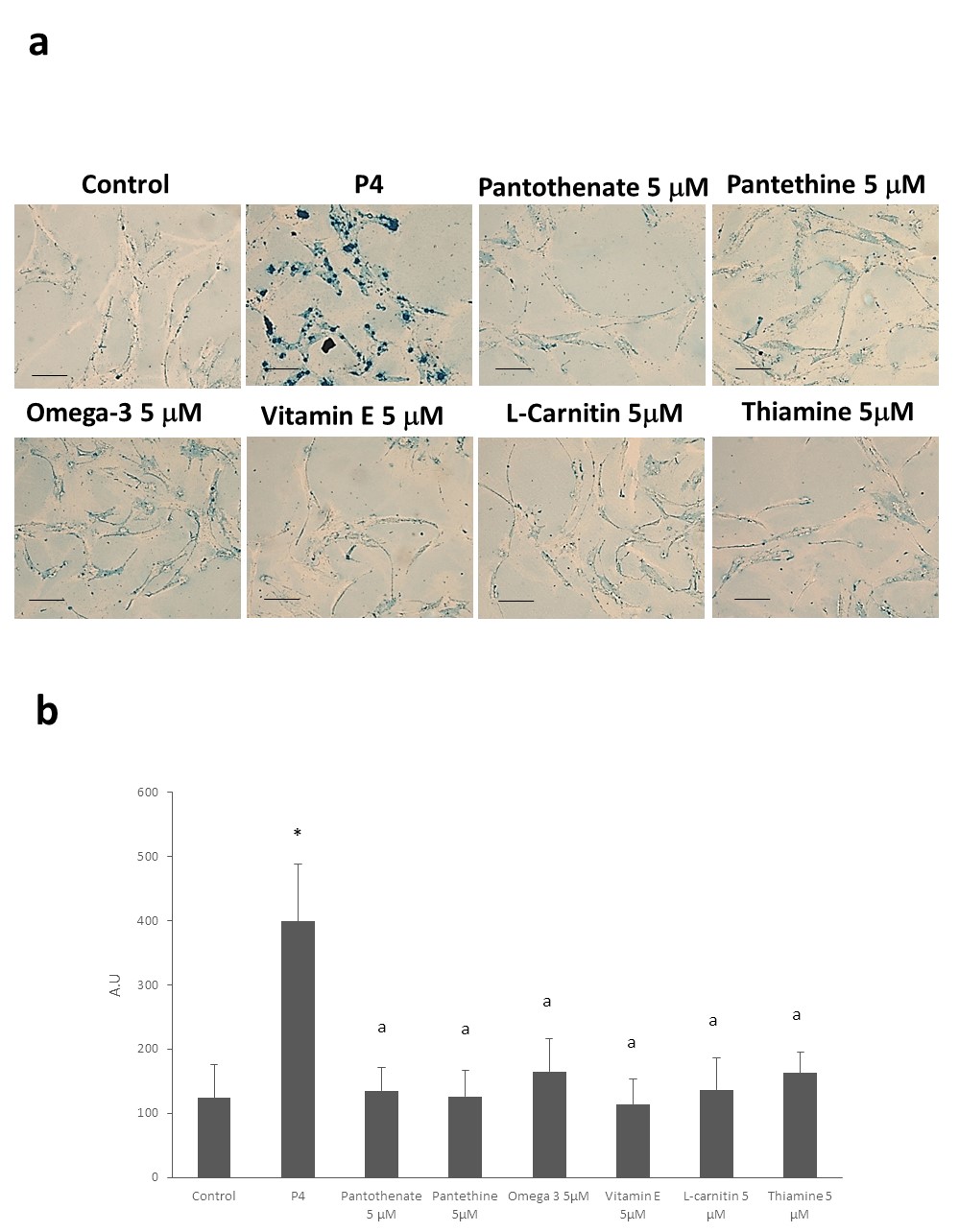
**Supplementary Figure 5.** Densitometry Westerns Figure **6b**. Data represent the mean±SD of three separate experiments. \*p<0.01 between PKAN patients and controls. ap<0.01 between untreated and treated fibroblasts. A.U., arbitrary units.

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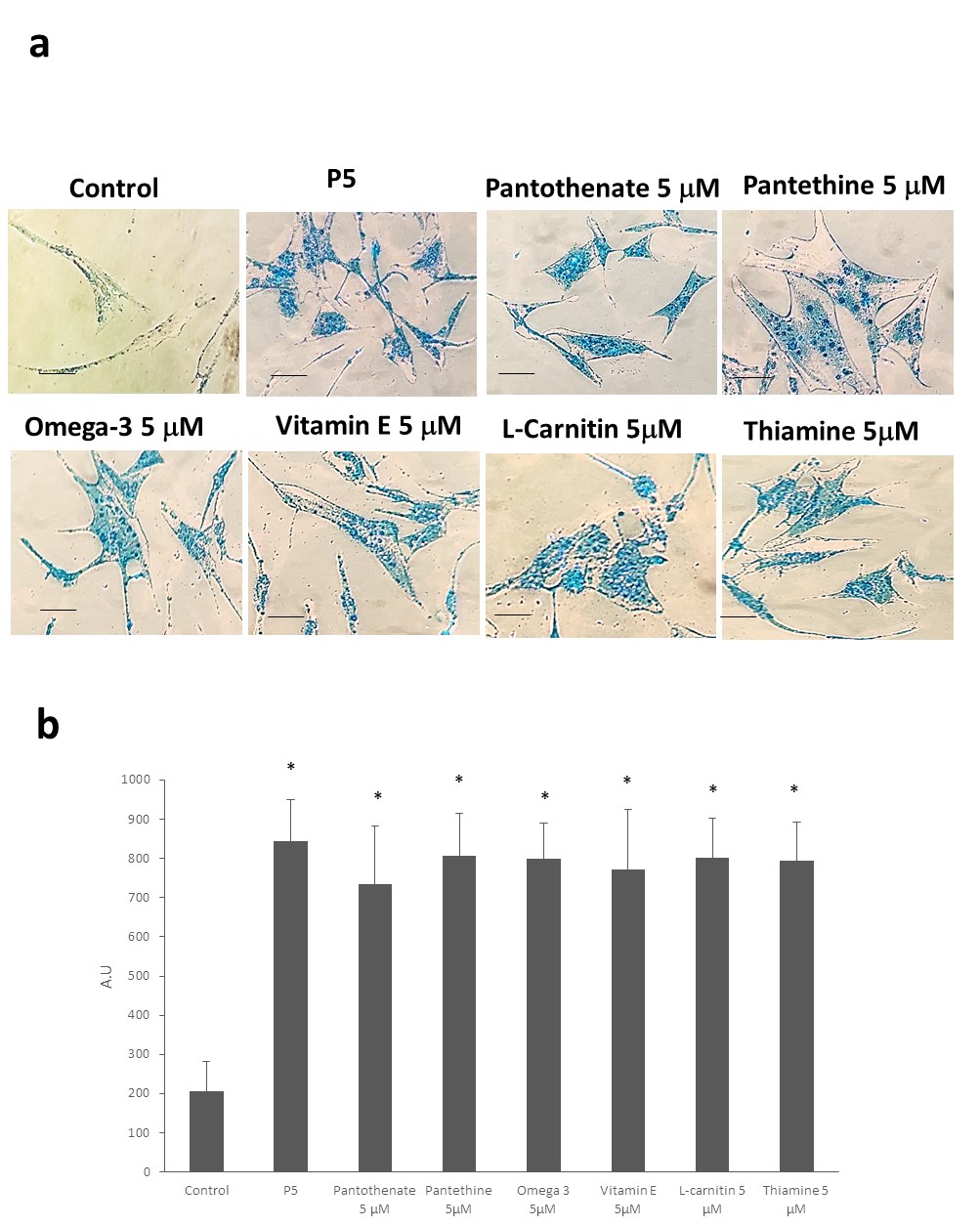
**Supplementary Figure 6.** (**a**) Control (C1) and PKAN fibroblasts (P2) were treated with pantothenate, pantethine, vitamin E, omega 3, L-carnitine or thiamine at 5 M for 20 days. Then, cells were stained with Prussian Blue as described in material and Methods and examined by bright-field microscopy. Scale bar= 15m. (**b**) Quantification of Prussian Blue staining. Images were analyzed by the Image J software. \*p<0.01 between Control and PKAN fibroblasts. ap<0.01 between untreated and treated fibroblasts. A.U., arbitrary units.

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**Supplementary Figure 7.** (**a**) Control (C1) and PKAN fibroblasts (P3) were treated with pantothenate, pantethine, vitamin E, omega 3, L-carnitine or thiamine at 5 M for 20 days. Then, cells were stained with Prussian Blue as described in material and Methods and examined by bright-field microscopy. Scale bar= 15m. (**b**) Quantification of Prussian Blue staining. Images were analyzed by the Image J software. \*p<0.01 between Control and PKAN fibroblasts. ap<0.01 between untreated and treated fibroblasts. A.U., arbitrary units.

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**Supplementary Figure 8.** (**a**) Control (C1) and PKAN fibroblasts (P4) were treated with pantothenate, pantethine, vitamin E, omega 3, L-carnitine or thiamine at 5 M for 20 days. Then, cells were stained with Prussian Blue as described in material and Methods and examined by bright-field microscopy. Scale bar= 15m. (**b**) Quantification of Prussian Blue staining. Images were analyzed by the Image J software. \*p<0.01 between Control and PKAN fibroblasts. ap<0.01 between untreated and treated fibroblasts. A.U., arbitrary units.



**Supplementary Figure 9.** (**a**) Control (C1) and PKAN fibroblasts (P5) were treated with pantothenate, pantethine, vitamin E, omega 3, L-carnitine or thiamine at 5 M for 20 days. Then, cells were stained with Prussian Blue as described in material and Methods and examined by bright-field microscopy. Scale bar= 15m. (**b**) Quantification of Prussian Blue staining. Images were analyzed by the Image J software. \*p<0.01 between Control and PKAN fibroblasts. ap<0.01 between untreated and treated fibroblasts. A.U., arbitrary units.