

Supplementary Materials: Mitochondrial Respiration in *KRAS* and *BRAF* Mutated Colorectal Tumors and Polyps

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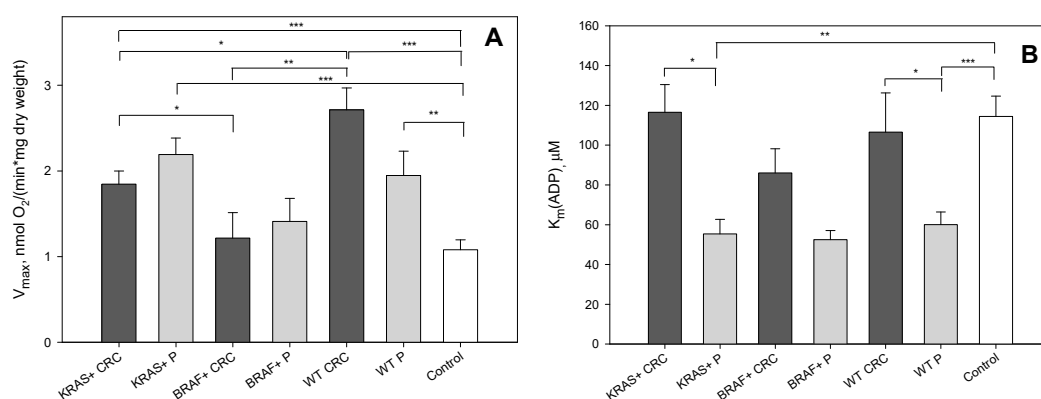


Figure S1. Regulation of mitochondrial respiration in *KRAS*⁺, *BRAF*⁺ and wild-type tumors and controls. (A) Comparative analysis of maximal respiratory rate (V_{max}) and (B) the apparent Michaelis-Menten constant ($K_m(\text{ADP})$) values for ADP. *KRAS*⁺—*KRAS* mutated; *BRAF*⁺—*BRAF* mutated; WT—wild type; CRC—colorectal cancer; P—polyps; Control—control tissue. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Table S1. The maximal ADP-activated respiration rates (V_{max}) comparison by molecular groups. Respiration rates are given in $\text{nmol O}_2/(\text{min} \times \text{mg dry weight})$ *KRAS*⁺—*KRAS* mutated; *BRAF*⁺—*BRAF* mutated; WT—wild-type; CRC—colorectal cancer; P—polyps; Control—control tissue.

V_{max} Comparison by Molecular Groups				
Group (n)	V_{max} value, $\text{nmol O}_2/(\text{min} \times \text{mg dry weight})$	Group (n)	V_{max} value, $\text{nmol O}_2/(\text{min} \times \text{mg dry weight})$	p value
<i>KRAS</i> ⁺ CRC (n = 19)	1.93 ± 0.16	<i>BRAF</i> ⁺ CRC (n = 7)	1.22 ± 0.30	0.037
<i>KRAS</i> ⁺ CRC (n = 19)	1.93 ± 0.16	WT CRC (n = 16)	2.67 ± 0.27	0.021
<i>BRAF</i> ⁺ CRC (n = 7)	1.22 ± 0.30	WT CRC (n = 16)	2.67 ± 0.27	0.004
<i>KRAS</i> ⁺ CRC (n = 19)	1.93 ± 0.16	<i>KRAS</i> ⁺ P (n = 7)	2.19 ± 0.19	0.383
<i>BRAF</i> ⁺ CRC (n = 7)	1.22 ± 0.30	<i>BRAF</i> ⁺ P (n = 2)	1.41 ± 0.27	0.755
WT CRC (n = 16)	2.67 ± 0.27	WT P (n = 13)	1.95 ± 0.28	0.079
<i>KRAS</i> ⁺ CRC (n = 19)	1.93 ± 0.16	Control (n = 18)	1.08 ± 0.12	<0.001
<i>BRAF</i> ⁺ CRC (n = 7)	1.22 ± 0.30	Control (n = 18)	1.08 ± 0.12	0.601
WT CRC (n = 16)	2.67 ± 0.27	Control (n = 18)	1.08 ± 0.12	<0.001
<i>KRAS</i> ⁺ P (n = 7)	2.19 ± 0.19	Control (n = 18)	1.08 ± 0.12	<0.001
<i>BRAF</i> ⁺ P (n = 2)	1.41 ± 0.27	Control (n = 18)	1.08 ± 0.12	0.373
WT P (n = 13)	1.95 ± 0.28	Control (n = 18)	1.08 ± 0.12	0.004

Table S2. K_m comparison by molecular groups. *KRAS*+—*KRAS* mutated; *BRAF*+—*BRAF* mutated; WT—wild type; CRC—colorectal cancer; P—polyps; Control—control tissue.

K_m Comparison by Molecular Groups				
Group (<i>n</i>)	K_m value, (μM)	Group (<i>n</i>)	K_m value, (μM)	<i>p</i> value
KRAS+ CRC (<i>n</i> = 18)	116.60 ± 13.86	BRAF+ CRC (<i>n</i> = 7)	86.02 ± 12.15	0.209
KRAS+ CRC (<i>n</i> = 18)	116.60 ± 13.86	WT CRC (<i>n</i> = 14)	106.55 ± 19.72	0.671
BRAF+ CRC (<i>n</i> = 7)	86.02 ± 12.15	WT CRC (<i>n</i> = 14)	106.55 ± 19.72	0.494
KRAS+ CRC (<i>n</i> = 18)	116.60 ± 13.86	KRAS+ P (<i>n</i> = 7)	55.33 ± 7.40	0.014
BRAF+ CRC (<i>n</i> = 7)	86.02 ± 12.15	BRAF+ P (<i>n</i> = 2)	52.45 ± 4.67	0.204
WT CRC (<i>n</i> = 14)	106.55 ± 19.72	WT P (<i>n</i> = 13)	60.07 ± 6.32	0.039
KRAS+ CRC (<i>n</i> = 18)	116.60 ± 13.86	Control (<i>n</i> = 18)	114.43 ± 10.23	0.901
BRAF+ CRC (<i>n</i> = 7)	86.02 ± 12.15	Control (<i>n</i> = 18)	114.43 ± 10.23	0.131
WT CRC (<i>n</i> = 14)	106.55 ± 19.72	Control (<i>n</i> = 18)	114.43 ± 10.23	0.708
KRAS+ P (<i>n</i> = 7)	55.33 ± 7.40	Control (<i>n</i> = 18)	114.43 ± 10.23	0.002
BRAF+ P (<i>n</i> = 2)	52.45 ± 4.67	Control (<i>n</i> = 18)	114.43 ± 10.23	0.064
WT P (<i>n</i> = 13)	60.07 ± 6.32	Control (<i>n</i> = 18)	114.43 ± 10.23	<0.001



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