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### Supplementary Data

Data to Figure 2a

<b>day</b>	<b>5nm Mean±SEM</b>	<b>10nm Mean±SEM</b>	<b>490nm Mean±SEM</b>	<b>Control Mean±SEM</b>
<b>1</b>	0.7 ± 0.2	0.7±0.1	0.7±0.1	1.0±0
<b>5</b>	6.6 ± 1.8	8.7±0.6	6.6±1.1	7.5±1.4
<b>10</b>	18.6 ± 7.1	18.8±5.6	27.0±14.4	21.5±8.7
<b>15</b>	39.5 ± 4.3	30±8.9	32.6±5.5	38.5±9.1
<b>20</b>	57.2 ± 15.4	73.5±10.6	62.4±8.9	46.7±8.0
<b>25</b>	65.1±17.5	60.2±25.5	61.8±25.0	65.2±33.9

Data to Figure 2b

<b>day</b>	<b>5nm Mean±SEM</b>	<b>10nm Mean±SEM</b>	<b>490nm Mean±SEM</b>	<b>Control Mean±SEM</b>
<b>1</b>	1.1±0.2	1.0±0.2	0.8±0.2	1.0±0
<b>5</b>	1.6±0.6	2.1±0.8	2.2±1.0	3.6±1.7
<b>10</b>	2.2±0.8	2.0±0.6	2.1±0.6	3.1±1.2
<b>15</b>	2.6±0.9	3.0±1.1	4.6±1.5	4.5±1.6
<b>20</b>	4.1±1.3	4.1±1.5	4.0±1.0	6.0±2.3
<b>25</b>	4.8±1.4	4.3±1.4	4.5±1.3	3.8±1.0

Data to Figure 3

		<b>3h</b>	<b>6h</b>	<b>24h</b>
		<b>Mean±SEM</b>	<b>Mean±SEM</b>	<b>Mean±SEM</b>
<b>IL6</b>	5nm	1.0±0.3	1.2±0.5	1.2±0.5
	10nm	1.3±0.5	1.0±0.1	1.0±0.2
	control	1.0±0	1.0±0	1.0±0
<b>NOS2</b>	5nm	0.9±0	1.0±0.1	1.1±0.1
	10nm	0.9±0.1	1.2±0.2	1.1±0.1
	control	1.0±0	1.0±0	1.0±0
<b>IL12a</b>	5nm	1.7±0.4	1.2±0.2	1.4±0.3
	10nm	1.3±0.2	1.8±0.6	1.3±0.4
	control	1.0±0	1.0±0	1.0±0
<b>CCL20</b>	5nm	17.4±8.8	4.9±0.8	2.3±0.7
	10nm	19.1±9.8	5.4±1.1	2.1±0.8
	control	1.0±0	1.0±0	1.0±0
<b>COX2</b>	5nm	3.3±0.6	2.0±0.3	1.2±0.3
	10nm	3.0±0.8	1.8±0.1	1.5±0.2
	control	1.0±0	1.0±0	1.0±0
<b>ICAM1</b>	5nm	2.6±0.4	2.0±0.3	1.0±0.1
	10nm	2.5±0.4	2.4±0.4	1.0±0.1
	control	1.0±0	1.0±0	1.0±0
<b>HSPA6</b>	5nm	1.3±0.8	1.3±0.5	5.8±2.0
	10nm	1.0±0.2	1.7±0.5	12.0±3.2
	control	1.0±0	1.0±0	1.0±0
<b>IL8</b>	5nm	11.6±3.4	6.6±2.2	6.1±1.9
	10nm	10.3±3.1	9.7±2.7	8.8±2.9
	control	1.0±0	1.0±0	1.0±0

Data to Figure 4

<b>day</b>	<b>5nm</b>	<b>10nm</b>	<b>490nm</b>	<b>Control</b>
	<b>Mean±SEM</b>	<b>Mean±SEM</b>	<b>Mean±SEM</b>	<b>Mean±SEM</b>
<b>1</b>	6.1±1.9	8.8±2.9	1.8±0.9	1±0
<b>5</b>	0.9±0.2	0.9±0.2	1.6±0.7	1±0
<b>10</b>	0.7±0.1	1.9±1.0	0.4±0.1	1±0
<b>15</b>	1.2±0.7	1.4±0.5	2.0±0.9	1±0
<b>20</b>	1.1±0.5	0.9±0.2	1.4±0.4	1±0
<b>25</b>	2.3±0.9	1.2±0.2	0.6±0.1	1±0

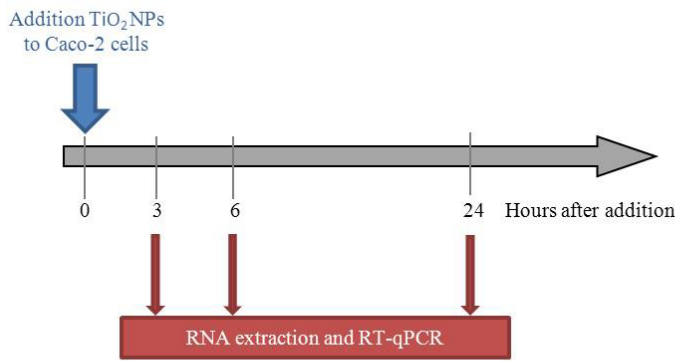
Data to Figure 5i

	<b>5nm</b>	<b>10nm</b>	<b>490nm</b>
<b>Mean±SEM</b>	4.9±0.7	5.3±0.7	1.5±0.2

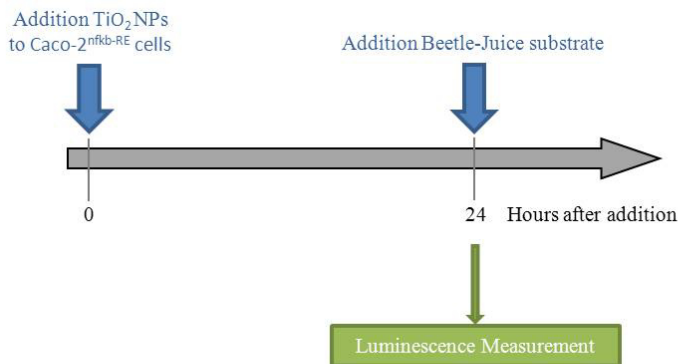
Data to Figure 5j

	<b>5nm</b>	<b>10nm</b>	<b>490nm</b>	<b>Control</b>
	<b>Mean±SEM</b>	<b>Mean±SEM</b>	<b>Mean±SEM</b>	<b>Mean±SEM</b>
<b>Without inhibitor</b>	5.3±0.9	7.2±2.1	2.1±1.3	1.0±0
<b>Bay11-7082</b>	1.9±0.4	2.8±0.5	1.5±0.7	1.5±0.5
<b>SB202190</b>	3.8±0.9	1.8±0.3	2.2±1.1	1.1±0.2

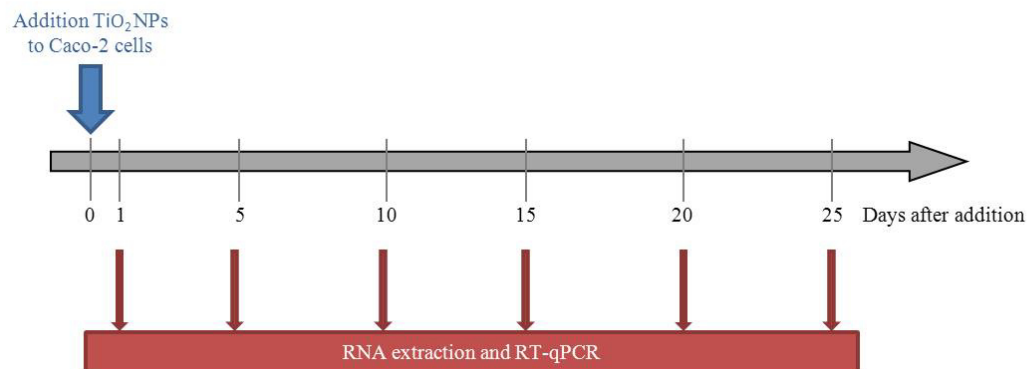
(a) **Acut impact**



(b) **Acut impact NF-κB RE assay**



(c) **Chronic impact**



**Supplementary Fig 1** Schematic illustration of our experimental design. (a) Acute impact of TiO<sub>2</sub> exposure measured by RT-qPCR. After reaching confluency, TiO<sub>2</sub> particles of indicated size or water (control) were added to the cells at a final concentration of 40 μg particles per cm<sup>2</sup> cell growth surface. Cells were incubated at 37°C for 3, 6 and 24 hours and RNA extraction and RT-qPCR for the indicated genes were performed. (b) Acute impact of TiO<sub>2</sub> exposure measured by NF-κB assay. After reaching confluency, TiO<sub>2</sub> particles of indicated size or water (control) were added to the cells at a final concentration of 40 μg particles per cm<sup>2</sup> cell growth surface. Cells were incubated at 37°C for 24 hours. Cells were washed and Beetle-Juice substrate was added. After 10min of incubation Luminescence was measured. (c) Chronic impact of TiO<sub>2</sub> exposure measured by RT-qPCR. After reaching confluency, TiO<sub>2</sub> particles of indicated size or water (control) were added to the cells at a final concentration of 40 μg particles per cm<sup>2</sup> cell growth surface. Cells were incubated at 37°C for one, five, 10, 15, 20 and 25 days respectively and RNA extraction and RT-qPCR for the indicated genes was performed.