

## **Supplementary Materials and Methods**

### **The effect of cysteine oxidation on DJ-1 cytoprotective function in human alveolar type II cells**

Karim Bahmed<sup>1,2#</sup>, Samia Boukhenouna<sup>1,2#</sup>, Loukmane Karim<sup>1,2</sup>, Tessa Andrews<sup>3</sup>, Jiusheng Lin<sup>3</sup>, Robert Powers<sup>3,4,5</sup>, Mark A. Wilson<sup>3,5</sup>, Chih-Ru Lin<sup>1,2</sup>, Elise Messier<sup>6</sup>, Nichole Reisdorph<sup>6</sup>, Roger L. Powell<sup>6</sup>, Hsin-Yao Tang<sup>7</sup>, Robert J. Mason<sup>6</sup>, Gerard J. Criner<sup>1,2</sup>, Beata Kosmider<sup>1,2,8,\*</sup>

<sup>1</sup>Department of Thoracic Medicine and Surgery, Temple University, Philadelphia, PA 19140

<sup>2</sup>Center for Inflammation, Translational and Clinical Lung Research, Temple University, Philadelphia, PA 19140

<sup>3</sup>University of Nebraska, Lincoln, NE 68588

<sup>4</sup>Nebraska Center for Integrated Biomolecular Communication, University of Nebraska, Lincoln, NE 68588

<sup>5</sup>Redox Biology Center, University of Nebraska, Lincoln, NE 68588

<sup>6</sup>National Jewish Health, Denver, CO, 80206

<sup>7</sup>The Wistar Institute, Philadelphia, PA 19104

<sup>8</sup>Department of Physiology, Temple University, Philadelphia, PA 19140

# These authors contributed equally to this work

\* Correspondence:

Beata Kosmider, PhD or Karim Bahmed, PhD

Department of Thoracic Medicine and Surgery

Center for Inflammation, Translational and Clinical Lung Research

Temple University

3500 N. Broad Street

Philadelphia, PA 19140

E-mail: [beata.kosmider@temple.edu](mailto:beata.kosmider@temple.edu)

**Supplementary Table 1.** Primers used to analyze mRNA expression by RT-PCR, mtDNA amount and mtDNA damage by qPCR.

| Gene                       |   | Primer's sequence (5'-3')  |
|----------------------------|---|----------------------------|
| GAPDH                      | F | GGAGCGAGATCCCTCCAAAAAT     |
|                            | R | GGCTGTTGTCATACTCTCATGG     |
| DJ-1                       | F | GTA<br>GCCGTGATGTGGTCATT   |
|                            | R | CTGTGCGCCCAGATTACC         |
| ND1                        | F | CCGAATCACCTGACGGTTCA       |
|                            | R | TCTGGCTGCTTCTGAATCCC       |
| Short mtDNA fragment       | F | GAATTAACTAGAAATAACTTGCAAGG |
|                            | R | CCAGCTATCACCAGGCTC         |
| Long mtDNA fragment        | F | ACAAAGAACCTAACACCCAGC      |
|                            | R | TGTTGAGCTTGAACGCTTTC       |
| Short nuclear DNA fragment | F | TGCTGTCTCCATGTTGATGTATCT   |
|                            | R | TCTCTGCTCCCCACCTCTAAGT     |