

Decline in NRF2 regulated antioxidants in COPD lungs due to loss of its positive regulator DJ-1

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ONLINE DATA SUPPLEMENT

TABLE E1. Age and gender-adjusted ratios (95% confidence intervals) of NRF2, its target antioxidants (NQO1, GCLM and HO1) and its regulators (KEAP1 and DJ-1) mRNA and protein levels in GOLD1-2 (mild COPD), and GOLD 3-4 (advanced COPD) and non-emphysematous lungs

	Non-COPD (N = 26)	GOLD 1-2 (N = 18)	GOLD3-4 (N = 21)	p-value
NRF2				
mRNA (relative fold change)	1.00 (reference)	1.75 (1.20, 2.56)	1.07 (0.73, 1.56)	0.593
Protein (arbitrary value)	1.00 (reference)	NA	0.04 (0.02, 0.06)	<0.0001
NQO1				
mRNA (relative fold change)	1.00 (reference)	0.42 (0.33, 0.53)	0.30 (0.24, 0.37)	<0.0001
Protein (arbitrary value)	1.00 (reference)	NA	0.57 (0.36, 0.89)	<0.0001
GCLM				
mRNA (relative fold change)	1.00 (reference)	0.30 (0.25, 0.37)	0.25 (0.21, 0.30)	<0.0001
Protein (arbitrary value)	1.00 (reference)	NA	0.09 (0.04, 0.20)	<0.0001
HO1				
mRNA (relative fold change)	1.00 (reference)	0.58 (0.44, 0.76)	0.27 (0.21, 0.36)	<0.0001
Protein (arbitrary value)	1.00 (reference)	NA	0.23 (0.07, 0.72)	<0.0001
KEAP1				
mRNA (relative fold change)	1.00 (reference)	1.04 (0.78, 1.38)	0.85 (0.64, 1.21)	0.91
Protein (arbitrary value)	1.00 (reference)	NA	1.19 (0.74, 1.92)	0.48
DJ-1				
mRNA (relative fold change)	1.00 (reference)	0.71 (0.62, 0.82)	0.43 (0.37, 0.82)	<0.0001
Protein (arbitrary value)	1.00 (reference)	NA	0.15 (0.09, 0.26)	<0.0001
GSH				
(nmole/mg protein)	1.00 (reference)	NA	0.09 (0.03, 0.30)	0.003
TBARS				
(µmole/mg protein)	1.00 (reference)	NA	13.1 (6.5, 26.7)	<0.0001

NA: not available; *Ratios (95% CIs) and p-values were obtained from a linear regression model on log₂-transformed mRNA and protein levels comparing GOLD1-2 and GOLD3-4 to non-emphysematous lung samples.

