Total cluster: 55

**#1NF: 13 (ENSG00000210082) Important gene**

cluster2\_c0c1

'ENSG00000108821,'ENSG00000168542'

Swiss

'P02452', 'P02461'

cluster3\_c0c2

'ENSG00000210082','ENSG00000198786','ENSG00000198804'

Swiss

'Q8IVG9','P03915','P00395' #1NF

cluster3\_c1c2

'ENSG00000210082','ENSG00000198886','ENSG00000198888','ENSG00000198899','ENSG00000198804','ENSG00000198786'

Swiss

'Q8IVG9', 'P03905','P03886','P00846','P00395','P03915' #1NF

Top Biological Process: GO:2000272 / negative regulation of signaling receptor activity / no sig. Correct p-value

Top Cellular Component: GO:0043005 / neuron projection / no sig. Correct p-value

Top Molecular Function: GO:0003954 / NADH dehydrogenase activity / Sig. correct p-values

cluster4\_c0c2

ENSG00000113140.9, ENSG00000108821.12, ENSG00000164692.16, ENSG00000168542.11

SwissProt IDs

'P09486', 'P02452', 'P08123', 'P02461'

cluster4\_c0c3

'ENSG00000210082','ENSG00000198899','ENSG00000198886','ENSG00000198804','ENSG00000198938'

Swiss

'Q8IVG9',P00846', 'P03905', 'P00395' 'P00414' #1NF

Top Biological Process: GO:2000272 / negative regulation of signaling receptor activity / no sig. Correct p-value

Top Molecular Function: GO:0003954 / NADH dehydrogenase activity / Sig. correct p-values

cluster4\_c2c3

'ENSG00000210082','ENSG00000198886', 'ENSG00000198804.2'

Swiss

['Q8IVG9','P03905','P0039'] #1NF

cluster5\_c0c1

'ENSG00000198886','ENSG00000198899','ENSG00000198763','ENSG00000198804','ENSG00000198712','ENSG00000198727'

Swiss

'P03905','P00846','P03891','P00395','P00403','P00156'

Top Biological Process: GO:0055093 / response to hyperoxia / Sig. Corrected P-value

Top Molecular Function: GO:0015078 / proton transmembrane transporter activity / Sig. Corrected P-value

cluster5\_c0c3

'ENSG00000153002'

Swiss

'P15086'

cluster5\_c0c4

'ENSG00000164692','ENSG00000168542'

Swiss

'P08123','P02461'

cluster5\_c1c2

'ENSG00000198886','ENSG00000198899','ENSG00000198763','ENSG00000198712','ENSG00000198804'

Swiss:

'P03905','P00846','P03891','P00403','P00395'

cluster5\_c1c3

'ENSG00000198886','ENSG00000198899','ENSG00000153002','ENSG00000198763'

Swiss

'P03905','P00846','P15086','P03891'

cluster5\_c1c4

'ENSG00000198886','ENSG00000198899','ENSG00000198763','ENSG00000198712','ENSG00000198727','ENSG00000198804'

Swiss

'P03905','P00846','P03891','P00403','P00156','P00395'

cluster5\_c2c3

'ENSG00000153002'

Swiss

'P15086'

cluster5\_c3c4

'ENSG00000153002'

Swiss

'P15086'

cluster6\_c0c1

'ENSG00000153002'

Swiss

'P15086'

cluster6\_c0c2

'ENSG00000153002'

Swiss

'P15086'

cluster6\_c0c3

'ENSG00000211896','ENSG00000153002'

Swiss

'P01857','P15086'

cluster6\_c0c4

'ENSG00000153002','ENSG00000210082','ENSG00000198727','ENSG00000198886'

Swiss

'P15086','Q8IVG9','P00156','P03905' #1NF

cluster6\_c0c5

'ENSG00000153002'

Swiss

'P15086'

cluster6\_c1c3

'ENSG00000211896'

Swiss

'P01857'

cluster6\_c1c4

'ENSG00000198763','ENSG00000198886','ENSG00000210082','ENSG00000198786'

Swiss

'P03891','P03905','Q8IVG9','P03915' #1NF

cluster6\_c2c3

'ENSG00000211896','ENSG00000211592'

Swiss

'P01857','P01857' #2NF

cluster6\_c2c4

'ENSG00000198888','ENSG00000198886','ENSG00000210082','ENSG00000198899','ENSG00000198763','ENSG00000198804'

Swiss

'P03886','P03905','P00846','P03891','P00395','Q8IVG9' #1NF

Top Biological Process: GO:0072593 / reactive oxygen species metabolic process / No sig. Correct P values

Top Molecular Function: GO:0003954 / NADH dehydrogenase activity / Highly sig. Corrected p-values

cluster6\_c2c5

'ENSG00000113140','ENSG00000164692'

Swiss

'P09486','P08123'

cluster6\_c3c4

'ENSG00000211896'

Swiss

'P01857'

cluster6\_c3c5

'ENSG00000211896','ENSG00000211592','ENSG00000113140'

Swiss

'P01857', 'P01834','P09486' #3NF

cluster6\_c4c5

'ENSG00000164692'

Swiss

'P08123'

cluster7\_c0c1

'ENSG00000153002','ENSG00000211896'

swiss

'P15086','P01857' #4nf

cluster7\_c0c2

'ENSG00000211896','ENSG00000211592','ENSG00000113140'

swiss

'P01857','P01857','P09486'

cluster7\_c0c3

'ENSG00000211896','ENSG00000211592'

Swiss

'P01857','P01857'

cluster7\_c0c4

ENSG00000211896

Swiss

'P08123'

cluster7\_c0c5

ENSG00000211896

Swiss

'P08123'

cluster7\_c1c2

'ENSG00000153002'

swiss

'P15086'

cluster7\_c1c3

'ENSG00000153002'

swiss

P15086'

cluster7\_c1c4

'ENSG00000153002'

swiss

P15086'

cluster7\_c1c5

'ENSG00000153002','ENSG00000210082'

swiss

'P15086','Q8IVG9' #1nf

cluster7\_c2c3

'ENSG00000113140','ENSG00000164692','ENSG00000168542'

swiss

'P09486','P08123','P02461'

cluster7\_c2c5

'ENSG00000168542','ENSG00000164692','ENSG00000210082'

swiss

'P02461','P08123','Q8IVG9' #1nf

cluster7\_c3c5

'ENSG00000198888','ENSG00000198886','ENSG00000210082','ENSG00000198899','ENSG00000198763','ENSG00000198804'

swiss

'P03886','P03905','Q8IVG9','P00846','P03891','P00395' #1NF

Top Biological Process: GO:0072593 / reactive oxygen species metabolic process / No sig. Correct P values

Top Molecular Function: GO:0003954 / NADH dehydrogenase activity / Highly sig. Corrected p-values

cluster7\_c4c5

'ENSG00000210082','ENSG00000198886','ENSG00000198763','ENSG00000198786','ENSG00000198899'

swiss

'Q8IVG9','P03905','P03891','P03915','P00846' #1nf

cluster8\_c0c1

'ENSG00000153002'

swiss

'P15086'

cluster8\_c0c3

'ENSG00000153002','ENSG00000198899','ENSG00000198886','ENSG00000198763'

swiss

'P15086','P00846','P03905','P03891'

cluster8\_c0c4

'ENSG00000153002'

swiss

'P15086'

cluster8\_c0c5

'ENSG00000153002'

swiss

'P15086'

cluster8\_c0c6

'ENSG00000153002'

swiss

'P15086'

cluster8\_c0c7

'ENSG00000153002','ENSG00000198938'

swiss

'P15086','P00414'

cluster8\_c1c3

'ENSG00000198886','ENSG00000198899','ENSG00000198712','ENSG00000198804','ENSG00000198727'

swiss

'P03905','P00846','P00403','P00395','P00156'

cluster8\_c1c7

'ENSG00000210082','ENSG00000198886'

swiss

'Q8IVG9','P03905' #1NF

cluster8\_c3c4

'ENSG00000198886','ENSG00000198899','ENSG00000198763','ENSG00000198712','ENSG00000198804','ENSG00000198727','ENSG00000198888'

swiss

'P03905','P00846','P03891','P00403','P00395','P00156','P03886'

cluster8\_c3c5

'ENSG00000198886','ENSG00000198763','ENSG00000198899'

swiss

'P03905','P03891','P00846'

cluster8\_c3c6

'ENSG00000198886','ENSG00000198899','ENSG00000198763','ENSG00000198712','ENSG00000198727','ENSG00000198804'

swiss

'P03905','P00846','P03891','P00403','P00156','P00395'

Top Biological Process: GO:0055093 / response to hyperoxia / Sig FDR p-value

Top Molecular Function: GO:0015078 / proton transmembrane transporter activity / Highly sig. Corrected p-values

cluster8\_c3c7

'ENSG00000198886','ENSG00000198899','ENSG00000198763','ENSG00000198804','ENSG00000198712','ENSG00000198727','ENSG00000198938'

swiss

'P03905','P00846','P03891','P00395','P00403','P00156','P00414'

cluster8\_c4c6

'ENSG00000113140','ENSG00000164692'

swiss

'P09486','P08123'

cluster8\_c4c7

'ENSG00000198938','ENSG00000198886','ENSG00000198804','ENSG00000210082'

swiss

'P00414','P03905','P00395','Q8IVG9' #1NF

Top Biological Process: GO:2000272 / negative regulation of signaling receptor activity / no sig. Adjusted p-value

Top Molecular Functions: GO:0016491 / oxidoreductase activity / sig. Corrected p-values

cluster8\_c6c7

'ENSG00000168542','ENSG00000164692'

swiss

'P02461','P08123'