

| B cell                   | Genes up regulated | Example biological process (up regulated genes)                                                 | GO ID      | Genes down regulated | Example biological process (down regulated genes)      | GO ID      |
|--------------------------|--------------------|-------------------------------------------------------------------------------------------------|------------|----------------------|--------------------------------------------------------|------------|
| Mature B cell            | 134                | Antigen processing and presentation of peptide or polysaccharide antigen via MHC class II       | GO:0002504 | 57                   | Antigen receptor-mediated signaling pathway            | GO:0050851 |
| B-1a B cell              | 91                 | Anatomical structure development                                                                | GO:0048856 | 66                   | Cellular chloride ion homeostasis                      | GO:0030644 |
| B-1b B cell              | 66                 | Cellular chloride ion homeostasis                                                               | GO:0030644 | 91                   | Anatomical structure development                       | GO:0048856 |
| Fraction F mature B cell | 2                  | Cellular iron ion homeostasis                                                                   | GO:0006879 | 0                    |                                                        |            |
| Germinal center B cell   | 1160               | Mitotic cell cycle                                                                              | GO:0000278 | 524                  | Regulation of metabolic process                        | GO:0019222 |
| Marginal zone B cell     | 99                 | Antigen processing and presentation, endogenous lipid antigen via MHC class Ib                  | GO:0048006 | 32                   | Regulation of phosphate metabolic process              | GO:0019220 |
| B-1 B cell               | 59                 | Activation of protein kinase C activity by G-protein coupled receptor protein signaling pathway | GO:0007205 | 6                    | Regulation of actin polymerization or depolymerization | GO:0008064 |
| <b>Total</b>             | <b>1611</b>        |                                                                                                 |            | <b>776</b>           |                                                        |            |