**Supplementary Table 1**. Primer nucleotide sequences for PARR assay.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| PARR | Receptor | Primer name | Sequence | Product size (bp) | Reference |
| Cat | BCR | V3F1 | 5'-GGTGGAGTCTGGGGGAGACCTG-3' | 310-380 | Mochizuki et al., 2011 |
| V3F2 | 5'-GGGGGTCCCTGAGACTCACCTG-3' | 270-340 |
| V3F3 | 5'-GGGTCCGCCAGGCTCCAGG-3' | 210-280 |
| V3F4 | 5'-GGCCGATTCACCATCTCCAGAGAC-3' | 120-190 |
| JR1 | 5'-GCYSTCACCAGGRYTCCYBGGC -3' | common reverse V3F1-4 |
| JR2 | 5'-GCTGYGACHMTDGTTCCAYGGCCC-3' |
| JR3 | 5'-GCGRTGAYCWGGGTRYCYTGGC-3' |
| JR4 | 5'-GCGGTGACCAGGGTCCCGGGGCCC-3' |
| JR5 | 5'-GCCGTCACCAGGGTTCCGACGCC-3' |
| TCR | TCRG V | 5'-AAGAGCGAYGAGGGMGTGT-3' | 80-120 | Moore et al., 2005 |
| TCRG J  | 5'-CTGAGCAGTGTGCCAGSACC-3' |
| Dog | BCR | Cµ 1  | 5'-TTCCCCCTCATCACCTGTGA-3' | 130 | Burnett et al., 2003 |
| Cµ 2 | 5'-GGTTGTTGATTGCACTGAGG-3' |
| CB1 | 5'-CAGCCTGAGAGCCGAGGACAC-3' | 85-139 |
| CB2 | 5'- TGAGGAGACGGTGACCAGGGT-3' |
| CB1 | 5'-CAGCCTGAGAGCCGAGGACAC-3' | about 120 |
| CB 3 | 5'-TGAGGACACAAAGAGTGAGG-3' |
| TCR | TCRγ1 | 5'-ACCCTGAGAATTGTGCCAGG-3' | about 90 |
| TCRγ2 | 5'-GTTACTATAAACCTGGTAAC-3' |
| TCRγ3 | 5'-TCTGGGVTGTAVTACTGTGCTGTCTGG-3' |

**Supplementary Table 2**. Score assessment of histological and immunohistochemical findings in cases of feline lymphocytosis.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Case number** | **Epidermis** | **Adnexa** | **Dermis involvement** | **Cellular infiltrate** | **IHC** |
| Crust (0-1) | Ulcer (0-1) | Basket weave hyperkeratosis (0-3) | Compact hyperkeratosis (0-3) | Parakeratosis (0-3) | Hyperplasia (0-3) | Spongiosis (0-3) | Inflammation (0-3) | Epidermotropism (0-3) | Folliculotropism (0-3) | Siringotropism (0-3) | Sebaceous gland tropism (0-3) | Superficial (0-3) | Mid (0-3) | Deep (0-3) | Perivascular (0-3) | Diffuse (0-3) | Grenz zone (0-1) | Small lymphocytes (0-1) | Medium lymphocytes (0-1) | Large lymphocytes (0-1) | Indented lymphocytes (0-1) | Lymphocyte aggregates (0-1) | Mitosis (x 10 HPF) | Eosinophils (0-3) | Mast cells (0-3) | CD3 infiltrates (0-3) | CD20 infiltrates (0-3) | CD3 in nodules (0-1) | CD20 in nodules (0-1) |
| **1** | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | nd | 1 | 2 | 3 | 3 | 3 | 0 | 1 | 1 | 0 | 0 | 3 | 0 | 1 | 1 | 3 | 0 | 0 | 1 |
| **2** | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 1 | nd | nd | nd | 3 | 2 | 3 | 3 | 3 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 1 |
| **3** | 1 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | nd | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 3 | 0 | 0 | 1 |
| **4** | 1 | 1 | 0 | 0 | 0 | 3 | 1 | 0 | 1 | 0 | 0 | nd | 2 | 1 | 1 | 3 | 3 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 3 | 0 | 0 | 1 |
| **5** | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | nd | nd | 3 | 3 | 3 | 3 | 3 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 |
| **6** | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | nd | 3 | 2 | 1 | 0 | 3 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 1 |
| **7** | 1 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 1 | nd | nd | 3 | 3 | 3 | 3 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 0 | 1 |
| **8** | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 1 | 2 | 2 | 1 | nd | 2 | 1 | 3 | 2 | 3 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 3 | 1 | 0 | 1 |
| **9** | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 3 | 0 | 0 | 1 |
| **10** | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 2 | nd | nd | 3 | 3 | 3 | 3 | 3 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 3 | 0 | 1 | 1 |
| **11** | 1 | 1 | 0 | 0 | 0 | 2 | 1 | 0 | 1 | 2 | 0 | 0 | 1 | 3 | 3 | 3 | 3 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 1 |
| **12** | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | nd | 3 | 3 | 1 | 1 | 0 | 0 | 1 | 1 | 0  | 3 | 1 | 3 | 0 | 0 | 1 |
| **13** | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | nd | 0 | 3 | 2 | nd | 3 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 1 |
| **14** | 1 | 0 | 0 | 1 | 1 | 2 | 1 | 0 | 1 | 1 | nd | nd | 2 | 2 | 1 | 3 | 2 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 3 | 0 | 0 | 1 |
| **15** | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | nd | nd | nd | 3 | 3 | 3 | 3 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 26 | 0 | 0 | 3 | 0 | 0 | 0 |
| **16** | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | nd | nd | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 1 |
| **17** | 1 | 1 | 3 | 3 | 0 | 2 | 0 | 0 | 1 | 1 | 0 | nd | 3 | 1 | 2 | 3 | 3 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 3 | 0 | 1 | 1 |
| **18** | 0 | 0 | 1 | 2 | 0 | 2 | 1 | 0 | 2 | 0 | 0 | 0 | 3 | 3 | 3 | 3 | 3 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 3 | 0 | 0 | 1 |
| **19** | 1 | 0 | 3 | 1 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | nd | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 |

HPF=high power field; IHC=immunohistochemistry; nd=non detectable (structures not present within the examined section).

**Supplementary Table 3.** Score assessment of histological and immunohistochemical findings in cases of canine lymphocytosis.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Case number** | **Epidermis** | **Adnexa** | **Dermis involvement** | **Cellular infiltrate** | **IHC** |
| Crust (0-1) | Ulcer (0-1) | Basket weave hyperkeratosis (0-3) | Compact hyperkeratosis (0-3) | Parakeratosis (0-3) | Hyperplasia (0-3) | Spongiosis (0-3) | Inflammation (0-3) | Epidermotropism (0-3) | Folliculotropism (0-3) | Siringotropism (0-3) | Sebaceous gland tropism (0-3) | Superficial (0-3) | Mid (0-3) | Deep (0-3) | Perivascular (0-3) | Diffuse (0-3) | Grenz zone (0-1) | Small lymphocytes (0-1) | Medium lymphocytes (0-1) | Large lymphocytes (0-1) | Indented lymphocytes (0-1) | Lymphocyte aggregate (0-1) | Mitosis (x 10 HPF) | Eosinophils (0-3) | Mast cells (0-3) | CD3 infiltrates (0-3) | CD20 infiltrates (0-3) | CD3 in nodules (0-1) | CD20 in nodules (0-1) |
| **1** | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | no | nd | 0 | 3 | 3 | nd | 3 | 3 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 3 | 0 | 0 | 0 |
| **2** | 0 | 1 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 3 | 3 | 3 | 3 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 3 | 0 | 1 | 1 |
| **3** | 0 | 0 | 2 | 3 | 3 | 2 | 0 | 0 | 1 | 0 | 3 | nd | 3 | 3 | 1 | 3 | 3 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 3 | 0 | 1 | 1 |
| **4** | 1 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 1 | 2 | 3 | 3 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **5** | 0 | 0 | 2 | 2 | 0 | 2 | 1 | 1 | 2 | 0 | 0 | 0 | 2 | 3 | 2 | 3 | 3 | 0 | 1 | 1 | 0 | 1 | 2 | 2 | 0 | 0 | 3 | 1 | 0 | 1 |
| **6** | 1 | 0 | 3 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | nd | 3 | 1 | 0 | 3 | 3 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 3 | 0 | 0 |
| **7** | 0 | 0 | 3 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 1 | nd | 1 | 2 | 2 | 3 | 3 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 2 | 1 | 3 | 2 | 0 | 1 |
| **8** | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 2 | 2 | 3 | 3 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 2 | 1 | 2 | 3 | 1 | 1 |
| **9** | 0 | 0 | 3 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 3 | 2 | 0 | 3 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 0 | 0 | 1 |
| **10** | 1 | 0 | 3 | 3 | 3 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 1 | 1 | 1 | 3 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 2 | 3 | 2 | 0 | 1 |

HPF=high power field ; IHC=immunohistochemistry; nd=non detectable (no structures present within the examined section).