

EHJvRoan\_Methylation of a CTCF-binding site in PTPRG\_Supplementary table 1

| No: | ID   | Tissue location  | Type               | Sex | Age | MSI | PTPRG RT-PCR | CpG microarray | PTPRG dBSA | PTPRG cBSA | PTPRG MLPA |
|-----|------|------------------|--------------------|-----|-----|-----|--------------|----------------|------------|------------|------------|
| 1   | 180N | Ascending colon  | Normal             | F   | 86  |     |              | UM             | UM         | UM         |            |
| 1   | 180T | Ascending colon  | Adenoma            | F   | 86  | S   |              | [M]            | [M]        | [M]        |            |
| 2   | 184N | Coecum           | Normal             | F   | 56  |     |              | UM             |            | -          |            |
| 2   | 184T | Coecum           | Carcinoma          | F   | 56  | H   |              | [M]            |            | [M]        |            |
| 3   | 197N | Transverse colon | Normal             | F   | 58  |     |              | UM             |            | UM         |            |
| 3   | 197T | Transverse colon | Carcinoma          | F   | 58  | H   |              | [M]            |            | [M]        |            |
| 4   | 74N  | Coecum           | Normal             | -   | -   |     |              | UM             |            | UM         |            |
| 4   | 74T  | Coecum           | Carcinoma          | -   | -   | -   |              | [M]            |            | [M]        |            |
| 5   | 117N | Coecum           | Normal             | M   | 69  |     |              | pM             |            | UM         |            |
| 5   | 117T | Coecum           | Adenoma            | M   | 69  | S   |              | [M]            |            | [M]        |            |
| 6   | 118N | Coecum           | Normal             | F   | 69  |     |              | UM             |            | UM         |            |
| 6   | 118T | Coecum           | Adenoma            | F   | 69  | S   |              | [M]            |            | -          |            |
| 7   | 131N | Ascending colon  | Normal             | F   | 71  |     |              | pM             |            | UM         |            |
| 7   | 131T | Ascending colon  | Carcinoma          | F   | 71  | S   |              | [M]            |            | [M]        |            |
| 8   | 127N | Ascending colon  | Normal             | F   | 87  |     |              | -              | pM         | UM         |            |
| 8   | 127T | Ascending colon  | Carcinoma          | F   | 87  | S   |              | [M]            | [M]        | [M]        |            |
| 9   | 187N | Coecum           | Normal             | F   | 61  |     |              | -              | UM         | UM         |            |
| 9   | 187T | Coecum           | Carcinoma          | F   | 61  | S   |              | [M]            |            | -          |            |
| 10  | 503N | Coecum           | Normal             | F   | 63  |     |              | UM             | UM         | -          |            |
| 10  | 503T | Coecum           | Carcinoma          | F   | 63  | S   |              |                | [M]        | [M]        |            |
| 11  | 505N | Coecum           | Normal             | F   | 83  |     |              |                |            | UM         |            |
| 11  | 505T | Coecum           | Carcinoma          | F   | 83  | S   |              |                |            | [M]        |            |
| 12  | 97N  | Coecum           | Normal             | F   | 68  |     |              |                |            | UM         |            |
| 12  | 97T  | Coecum           | Carcinoma          | F   | 68  | S   |              | pM             |            | UM         |            |
| 13  | 111N | Sigmoid          | Normal             | F   | 79  |     |              | UM             |            | UM         |            |
| 13  | 111T | Sigmoid          | Adenoma            | F   | 79  | S   |              | [M]            |            | [M]        |            |
| 14  | 112N | Sigmoid          | Normal             | M   | 71  |     |              | UM             |            | UM         |            |
| 14  | 112T | Sigmoid          | Carcinoma          | M   | 71  | S   |              |                |            | -          |            |
| 15  | 113N | Rectosigmoid     | Normal             | M   | 72  |     |              | UM             |            | pM         |            |
| 15  | 113T | Rectosigmoid     | Carcinoma          | M   | 72  | S   |              | [M]            |            | [M]        |            |
| 16  | 577N | Ascending colon  | Normal             | M   | 32  |     |              | UM             |            | UM         |            |
| 16  | 577T | Ascending colon  | Adenoma            | M   | 32  | S   |              | [M]            |            | [M]        |            |
| 17  | 601N | Coecum           | Normal             | F   | 83  |     |              | UM             |            | UM         |            |
| 17  | 601T | Coecum           | Adenoma            | F   | 83  | H   |              | [M]            |            | [M]        |            |
| 18  | 606N | Ascending colon  | Normal             | F   | 43  |     |              |                |            | UM         |            |
| 18  | 606T | Ascending colon  | Carcinoma          | F   | 43  | S   |              |                |            | [M]        |            |
| 19  | 114N | Sigmoid          | Normal             | F   | 52  |     |              | UM             |            | -          |            |
| 19  | 114T | Sigmoid          | Carcinoma          | F   | 52  | S   |              | [M]            |            | [M]        |            |
| 20  | 592N | Rectum           | Normal             | M   | 61  |     |              | pM             |            | UM         |            |
| 20  | 592T | Rectum           | Carcinoma          | M   | 61  | S   |              | [M]            |            | [M]        |            |
| 21  | 588N | Transverse colon | Normal             | M   | 69  |     |              | pM             |            | UM         |            |
| 21  | 588T | Transverse colon | Carcinoma          | M   | 69  | S   |              | pM             |            | UM         |            |
| 22  | 115N | Descending colon | Normal             | M   | 66  |     |              | UM             |            | UM         |            |
| 22  | 115T | Descending colon | Carcinoma          | M   | 66  | S   |              | [M]            |            | [M]        |            |
| 23  | 49N  | Ascending colon  | Normal             | F   | 80  |     |              |                |            | UM         |            |
| 23  | 49T  | Ascending colon  | Carcinoma          | F   | 80  | H   |              |                |            | [M]        |            |
| 24  | 86N  | Ascending colon  | Normal             | F   | 80  |     |              |                |            | -          |            |
| 24  | 86T  | Ascending colon  | Carcinoma          | F   | 80  | H   |              |                |            | [M]        |            |
| 25  | 56N  | Coecum           | Normal             | M   | 75  |     |              |                |            | UM         |            |
| 25  | 56T  | Coecum           | Carcinoma          | M   | 75  | H   |              |                |            | [M]        |            |
| 26  | 57N  | Ascending colon  | Normal             | F   | 75  |     |              |                |            | UM         |            |
| 26  | 57T  | Ascending colon  | Carcinoma          | F   | 75  | H   |              |                |            | pM         |            |
| 27  | 499N | Coecum           | Normal             | F   | 69  |     |              |                |            | UM         |            |
| 27  | 499T | Coecum           | Carcinoma          | F   | 69  | H   |              |                |            | [M]        |            |
| 28  | 119N | Coecum           | Normal             | F   | 76  |     |              |                |            | UM         |            |
| 28  | 119T | Coecum           | Carcinoma          | F   | 76  | H   |              |                |            | [M]        |            |
| 29  | 179N | coecum           | Normal             | M   | 90  |     |              |                |            | UM         |            |
| 29  | 179T | coecum           | Carcinoma          | M   | 90  | H   |              |                |            | [M]        |            |
| 30  | 63N  | Coecum           | Normal             | F   | 57  |     |              |                |            | UM         |            |
| 30  | 63T  | Coecum           | Carcinoma          | F   | 57  | S   |              |                |            | [M]        |            |
| 31  | 132N | Ascending colon  | Normal             | F   | 64  |     |              |                |            | UM         |            |
| 31  | 132T | Ascending colon  | Carcinoma          | F   | 64  | H   |              |                |            | [M]        |            |
| 32  | 108N | Ascending colon  | Normal             | F   | 52  |     |              |                |            | -          |            |
| 32  | 108T | Ascending colon  | Carcinoma          | F   | 52  | S   |              |                |            | -          |            |
| 33  | 39N  | Coecum           | Normal             | M   | 77  |     |              |                |            | -          |            |
| 33  | 39T  | Coecum           | Carcinoma          | M   | 77  | S   |              |                |            | -          |            |
| 34  | HP1  | Sigmoid          | Hyperplastic polyp | M   | 51  | -   |              |                |            | [M]        |            |
| 35  | HP2  | flexura hepatica | Hyperplastic polyp | M   | 51  | -   |              |                |            | [M]        |            |
| 36  | HP3  | Transverse colon | Hyperplastic polyp | M   | 51  | -   |              |                |            | [M]        |            |
| 37  | HP4  | Ascending colon  | Hyperplastic polyp | F   | 73  | -   |              |                |            | [M]        |            |
| 38  | HP5  | -                | Hyperplastic polyp | M   | 62  | -   |              |                |            | [M]        |            |

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|    |       |                  |                    |   |    |   |  |  |  |  |     |
|----|-------|------------------|--------------------|---|----|---|--|--|--|--|-----|
| 39 | HP6   | -                | Hyperplastic polyp | M | 44 | - |  |  |  |  | pM  |
| 40 | SA1   | flexura hepatica | Serrated adenoma   | F | 74 | - |  |  |  |  | [M] |
| 41 | SA2   | Descending colon | Serrated adenoma   | F | 74 | - |  |  |  |  | [M] |
| 42 | SA3   | flexura hepatica | Serrated adenoma   | F | 55 | - |  |  |  |  | [M] |
| 43 | SA4   | Ascending colon  | Serrated adenoma   | M | 81 | - |  |  |  |  | [M] |
| 44 | SA5   | Coecum           | Serrated adenoma   | M | 70 | - |  |  |  |  | [M] |
| 45 | SA8   | Descending colon | Serrated adenoma   | F | 51 | - |  |  |  |  | [M] |
| 46 | SA9   | Rectosigmoid     | Serrated adenoma   | M | 60 | - |  |  |  |  | [M] |
| 47 | SA10  | Ascending colon  | Serrated adenoma   | F | 61 | - |  |  |  |  | [M] |
| 48 | SA11  | flexura hepatica | Serrated adenoma   | F | 73 | - |  |  |  |  | pM  |
| 49 | SA12  | Sigmoid          | Serrated adenoma   | F | 59 | - |  |  |  |  | pM  |
| 50 | SA13  | Transverse colon | Serrated adenoma   | M | 56 | - |  |  |  |  | pM  |
| 51 | SA14  | Transverse colon | Serrated adenoma   | M | 70 | - |  |  |  |  | UM  |
| 52 | TVA1  | Ascending colon  | Normal             | M | 44 | - |  |  |  |  | UM  |
| 52 | TVA1  | Ascending colon  | Adenoma            | M | 44 | - |  |  |  |  | [M] |
| 53 | TVA2  | -                | Adenoma            | M | 56 | - |  |  |  |  | [M] |
| 54 | TVA3  | Ascending colon  | Adenoma            | M | 81 | - |  |  |  |  | [M] |
| 55 | TVA4  | Ascending colon  | Adenoma            | M | 81 | - |  |  |  |  | [M] |
| 56 | TVA5  | -                | Adenoma            | M | 71 | - |  |  |  |  | [M] |
| 57 | TVA6  | Descending colon | Normal             | M | 82 | - |  |  |  |  | UM  |
| 57 | TVA6  | Descending colon | Adenoma            | M | 82 | - |  |  |  |  | [M] |
| 58 | TVA7  | Rectosigmoid     | Normal             | M | 60 | - |  |  |  |  | UM  |
| 58 | TVA7  | Rectosigmoid     | Adenoma            | M | 60 | - |  |  |  |  | [M] |
| 59 | TVA8  | Transverse colon | Adenoma            | F | 68 | - |  |  |  |  | [M] |
| 60 | TVA9  | Coecum           | Adenoma            | M | 79 | - |  |  |  |  | [M] |
| 61 | TVA10 | Descending colon | Adenoma            | M | 82 | - |  |  |  |  | [M] |
| 62 | TVA11 | Descending colon | Adenoma            | M | 82 | - |  |  |  |  | [M] |
| 63 | TVA12 | Coecum           | Normal             | F | 61 | - |  |  |  |  | UM  |
| 63 | TVA12 | Coecum           | Adenoma            | F | 61 | - |  |  |  |  | [M] |
| 64 | TVA13 | Coecum           | Normal             | M | 69 | - |  |  |  |  | UM  |
| 64 | TVA13 | Coecum           | Adenoma            | M | 69 | - |  |  |  |  | [M] |
| 65 | Ca1   | Transverse colon | Normal             | M | 79 | - |  |  |  |  | UM  |
| 65 | Ca1   | Transverse colon | Carcinoma          | M | 79 | - |  |  |  |  | [M] |
| 66 | Ca2   | -                | Carcinoma          | - | -  | - |  |  |  |  | [M] |
| 67 | Ca3   | -                | Carcinoma          | - | -  | - |  |  |  |  | [M] |
| 68 | Ca4   | appendix         | Normal             | M | 79 | - |  |  |  |  | UM  |
| 68 | Ca4   | Coecum           | Carcinoma          | M | 79 | - |  |  |  |  | [M] |
| 69 | Ca5   | -                | Carcinoma          | - | -  | - |  |  |  |  | [M] |
| 70 | Ca6   | Rectosigmoid     | Carcinoma          | F | 73 | - |  |  |  |  | UM  |
| 71 | Ca7   | Ascending colon  | Normal             | M | 53 | - |  |  |  |  | UM  |
| 71 | Ca7   | Ascending colon  | Carcinoma          | M | 53 | - |  |  |  |  | [M] |
| 72 | Ca8   | Rectosigmoid     | Normal             | F | 39 | - |  |  |  |  | UM  |
| 72 | Ca8   | Rectosigmoid     | Carcinoma          | F | 39 | - |  |  |  |  | [M] |
| 73 | Ca9   | -                | Carcinoma          | - | -  | - |  |  |  |  | [M] |
| 74 | Ca10  | -                | Carcinoma          | - | -  | - |  |  |  |  | [M] |
| 75 | Ca11  | Coecum           | Carcinoma          | M | 42 | - |  |  |  |  | [M] |
| 76 | Ca12  | Ascending colon  | Carcinoma          | F | 74 | - |  |  |  |  | [M] |
| 77 | Ca13  | Ascending colon  | Carcinoma          | F | 82 | - |  |  |  |  | [M] |
| 78 | Ca14  | Ascending colon  | Carcinoma          | M | 62 | - |  |  |  |  | [M] |
| 79 | Ca15  | Ascending colon  | Carcinoma          | F | 57 | - |  |  |  |  | [M] |
| 80 | Ca16  | -                | Carcinoma          | - | -  | - |  |  |  |  | [M] |
| 81 | Ca17  | Coecum           | Carcinoma          | M | 74 | - |  |  |  |  | [M] |
| 82 | Ca18  | Coecum           | Normal             | M | 61 | - |  |  |  |  | UM  |
| 82 | Ca18  | Coecum           | Carcinoma          | M | 61 | - |  |  |  |  | [M] |
| 83 | Ca19  | Coecum           | Normal             | M | 66 | - |  |  |  |  | pM  |
| 83 | Ca19  | Coecum           | Carcinoma          | M | 66 | - |  |  |  |  | [M] |
| 84 | Ca20  | Ascending colon  | Carcinoma          | F | 84 | - |  |  |  |  | [M] |
| 85 | Ca21  | Rectum           | Normal             | M | 74 | - |  |  |  |  | UM  |
| 85 | Ca21  | Rectum           | Carcinoma          | M | 74 | - |  |  |  |  | UM  |
| 86 | Ca22  | Coecum           | Normal             | F | 68 | - |  |  |  |  | UM  |
| 86 | Ca22  | Coecum           | Carcinoma          | F | 68 | - |  |  |  |  | [M] |
| 87 | Ca23  | Ascending colon  | Normal             | M | 67 | - |  |  |  |  | UM  |
| 87 | Ca23  | Ascending colon  | Carcinoma          | M | 67 | - |  |  |  |  | [M] |
| 88 | Ca24  | Coecum           | Normal             | M | 71 | - |  |  |  |  | UM  |
| 88 | Ca24  | Coecum           | Carcinoma          | M | 71 | - |  |  |  |  | [M] |
| 89 | Ca25  | Ascending colon  | Carcinoma          | M | 44 | - |  |  |  |  | [M] |
| 90 | Ca26  | Ascending colon  | Carcinoma          | M | 72 | - |  |  |  |  | pM  |
| 91 | Ca27  | Rectosigmoid     | Carcinoma          | M | 79 | - |  |  |  |  | [M] |
| 92 | Ca28  | Coecum           | Normal             | F | 68 | - |  |  |  |  | UM  |
| 92 | Ca28  | Coecum           | Carcinoma          | F | 68 | - |  |  |  |  | [M] |
| 93 | Ca30  | Coecum           | Carcinoma          | M | 77 | - |  |  |  |  | [M] |
| 94 | Ca31  | Ascending colon  | Normal             | M | 65 | - |  |  |  |  | UM  |
| 94 | Ca31  | Ascending colon  | Carcinoma          | M | 65 | - |  |  |  |  | [M] |
| 95 | Ca32  | Coecum           | Carcinoma          | F | 77 | - |  |  |  |  | [M] |
| 96 | Ca33  | Coecum           | Normal             | F | 82 | - |  |  |  |  | UM  |
| 96 | Ca33  | Coecum           | Carcinoma          | F | 82 | - |  |  |  |  | [M] |
| 97 | Ca34  | Ascending colon  | Normal             | F | 91 | - |  |  |  |  | UM  |
| 97 | Ca34  | Ascending colon  | Carcinoma          | F | 91 | - |  |  |  |  | [M] |

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|             |      |                 |           |      |    |    |  |    |  |    |  |     |  |    |  |    |  |
|-------------|------|-----------------|-----------|------|----|----|--|----|--|----|--|-----|--|----|--|----|--|
| 98          | Ca35 | Ascending colon | Normal    | M    | 65 |    |  |    |  |    |  | UM  |  |    |  |    |  |
| 98          | Ca35 | Ascending colon | Carcinoma | M    | 65 | -  |  |    |  |    |  | [M] |  |    |  |    |  |
| 99          | Ca36 | Coecum          | Normal    | F    | 82 |    |  |    |  |    |  | UM  |  |    |  |    |  |
| 99          | Ca36 | Coecum          | Carcinoma | F    | 82 | -  |  |    |  |    |  | [M] |  |    |  |    |  |
| 100         | Ca37 | Sigmoid         | Normal    | F    | 73 |    |  |    |  |    |  | UM  |  |    |  |    |  |
| 100         | Ca37 | Sigmoid         | Carcinoma | F    | 73 | -  |  |    |  |    |  | [M] |  |    |  |    |  |
| 101         | Ca38 | Coecum          | Normal    | M    | 80 |    |  |    |  |    |  | UM  |  |    |  |    |  |
| 101         | Ca38 | Coecum          | Carcinoma | M    | 80 | -  |  |    |  |    |  | [M] |  |    |  |    |  |
| 102         | Ca39 | Ascending colon | Normal    | M    | 48 |    |  |    |  |    |  | UM  |  |    |  |    |  |
| 102         | Ca39 | Ascending colon | Carcinoma | M    | 48 | -  |  |    |  |    |  | [M] |  |    |  |    |  |
| 103         | Ca40 | -               | Carcinoma | -    | -  | -  |  |    |  |    |  | [M] |  |    |  |    |  |
| 104         | Ca41 | -               | Carcinoma | -    | -  | -  |  |    |  |    |  | [M] |  |    |  |    |  |
| 105         | Ca42 | Coecum          | Normal    | F    | 61 |    |  |    |  |    |  | UM  |  |    |  |    |  |
| 105         | Ca42 | Coecum          | Carcinoma | F    | 61 | -  |  |    |  |    |  | [M] |  |    |  |    |  |
| 106         | Ca43 | Ascending colon | Normal    | F    | 75 |    |  |    |  |    |  | UM  |  |    |  |    |  |
| 106         | Ca43 | Ascending colon | Carcinoma | F    | 75 | -  |  |    |  |    |  | [M] |  |    |  |    |  |
| 107         | Ca44 | Ascending colon | Normal    | M    | 56 |    |  |    |  |    |  | UM  |  |    |  |    |  |
| 107         | Ca44 | Ascending colon | Carcinoma | M    | 56 | -  |  |    |  |    |  | [M] |  |    |  |    |  |
| 108         | Ca45 | Ascending colon | Normal    | F    | 79 |    |  |    |  |    |  | UM  |  |    |  |    |  |
| 108         | Ca45 | Ascending colon | Carcinoma | F    | 79 | -  |  |    |  |    |  | [M] |  |    |  |    |  |
| 109         | Ca46 | Ascending colon | Normal    | F    | 56 |    |  |    |  |    |  | UM  |  |    |  |    |  |
| 110         | Ca47 | Ascending colon | Normal    | M    | 65 |    |  |    |  |    |  | UM  |  |    |  |    |  |
| 111         | Ca48 | Ascending colon | Normal    | M    | 68 |    |  |    |  |    |  | UM  |  |    |  |    |  |
|             |      |                 |           |      |    |    |  |    |  |    |  |     |  |    |  |    |  |
| Left sided  |      | 20              |           |      |    | 0  |  | 0  |  | 5  |  | 0   |  | 19 |  |    |  |
| Right sided |      | 76              |           |      |    | 18 |  | 18 |  | 13 |  | 3   |  | 72 |  |    |  |
| NA          |      | 12              |           |      |    | 0  |  | 0  |  | 0  |  | 0   |  | 12 |  |    |  |
|             |      |                 |           |      |    |    |  |    |  |    |  |     |  |    |  |    |  |
| Nor         |      | 63              |           |      |    | 18 |  | 8  |  | 19 |  | 3   |  | 58 |  |    |  |
| HP          |      | 6               |           |      |    | 0  |  | 0  |  | 0  |  | 0   |  | 6  |  |    |  |
| SA          |      | 12              |           |      |    | 0  |  | 0  |  | 0  |  | 0   |  | 12 |  |    |  |
| Ad          |      | 19              |           |      |    | 3  |  | 3  |  | 6  |  | 2   |  | 18 |  |    |  |
| Ca          |      | 71              |           |      |    | 15 |  | 15 |  | 12 |  | 1   |  | 67 |  |    |  |
|             |      |                 |           |      |    |    |  |    |  |    |  |     |  |    |  |    |  |
| Male        |      |                 |           | 51   |    | 2  |  | 3  |  | 6  |  | 0   |  | 49 |  |    |  |
| Female      |      |                 |           | 48   |    | 14 |  | 14 |  | 11 |  | 3   |  | 45 |  |    |  |
| NA          |      |                 |           | 9    |    | 1  |  | 1  |  | 1  |  | 0   |  | 9  |  |    |  |
|             |      |                 |           |      |    |    |  |    |  |    |  |     |  |    |  |    |  |
| Average age |      |                 |           | 67.8 |    | 70 |  | 70 |  | 67 |  | 79  |  | 68 |  |    |  |
| SD          |      |                 |           | 12.4 |    | 10 |  | 10 |  | 13 |  | 14  |  | 12 |  |    |  |
|             |      |                 |           |      |    |    |  |    |  |    |  |     |  |    |  |    |  |
| MSS         |      |                 |           |      |    | 21 |  | 8  |  | 10 |  | 14  |  | 3  |  | 16 |  |
| MSI-H       |      |                 |           |      |    | 11 |  | 9  |  | 7  |  | 3   |  | 0  |  | 11 |  |
| NA          |      |                 |           |      |    | 76 |  | 1  |  | 1  |  | 1   |  | 0  |  | 76 |  |

M: Male  
 F: Female  
 Nor: Normal  
 HP: Hyperplastic polyp  
 SA: Serrated adenoma  
 Ad: Adenoma  
 Ca: Carcinoma  
 SD: Standard deviation  
 MSS: Microsatellite stable  
 MSI-H: Microsatellite unstable  
 -: Data not available

*PTPRG* RT-PCR: Expression analysis by RT-PCR  
 CpG microarray: Hybridized to the 8.5k CpG island microarray  
*PTPRG* dBSA: CpGs 2-10 analyzed by direct bisulfite sequencing  
*PTPRG* cBSA: CpGs 1-10 analyzed by clonal bisulfite sequencing  
*PTPRG* MS-MLPA: CpG9 analyzed by methylation specific MLPA  
 UM: Unmethylated ( $\leq 10\%$  of methylated CpGs in BSA; Methylation ratio  $\leq 0.22$  in MS-MLPA)  
 pM: Partially methylated ( $\leq 70\%$  of methylated CpGs in BSA; Methylation ratio between 0.22 and 0.39 in MS-MLPA)  
 [M]: Methylated ( $>70\%$  methylated CpGs in BSA; Methylation ratio  $>0.39$  in MS-MLPA)