**Supplementary File 4.** Primers used to generate chimeric and point mutant IbAr10200 and MT-1303 GPC expression constructs

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| **Primer name** | **Sequence** | **Description** |
| pCAGGS\_F | CGTGTGACCGGCGGCTCTAG | Primer in pCAGGS backbone to amplify N-term fragment of pCAGGS-GPC insert |
| pCAGGS\_R | AAAAAGATCTGCTAGCTCGA | Primer in pCAGGS backbone to amplify C-term fragment of pCAGGS-GPC insert |
| MTGc\_F | TGGTCTCTACCAGTGCCGTGGAAATGGAGAACCTGCCAGCC | Primer to amplify Gc region of MT-1303 for assembly into FLAG/HA-IbAr10200 Gn/MT-1303 Gc |
| 10200Gn\_R | CACGGCACTGGTAGAGACCA | Primer to amplify Gn region of IbAr10200 for assembly into FLAG/HA-IbAr10200 Gn/MT-1303 Gc |
| MTGn\_R | CACTGCGGTACTAGAAGTGA | Primer to amplify Gn region of MT-1303 for assembly into FLAG/HA-MT-1303 Gn/IbAr10200 Gc |
| 10200Gc\_F | TCACTTCTAGTACCGCAGTGGAGATGGAAAATCTGCCCGC | Primer to amplify Gc region of IbAr10200 for assembly into FLAG/HA-MT-1303 Gn/IbAr10200 Gc |
| 10200\_R1105G\_F | GGTGAGTGGAGGGAGTGAAT | Site-directed mutagenesis primer to generate FLAG/HA-IbAr10200 GPC-R1105G |
| 10200\_R1105G\_R | ATTCACTCCCTCCACTCACC | Site-directed mutagenesis primer to generate FLAG/HA-IbAr10200 GPC-R1105G |
| 10200\_R1104K\_F | GGTGAGTGGAAAGAGTGAAT | Site-directed mutagenesis primer to generate FLAG/HA-IbAr10200 GPC-R1105K |
| 10200\_R1105K\_R | ATTCACTCTTTCCACTCACC | Site-directed mutagenesis primer to generate FLAG/HA-IbAr10200 GPC-R1105K |
| 10200\_I1118M\_F | GAACCGGCATGTCTTGGGAC | Site-directed mutagenesis primer to generate FLAG/HA-IbAr10200 GPC-I1118M |
| 10200\_I1118M\_R | GTCCCAAGACATGCCGGTTC | Site-directed mutagenesis primer to generate FLAG/HA-IbAr10200 GPC-I1118M |
| MT\_G1116R\_F | GGTGAGCGGGAGATCAGAGA | Site-directed mutagenesis primer to generate FLAG/HA-MT 1303 GPC-G1116R |
| MT\_G1116R\_R | TCTCTGATCTCCCGCTCACC | Site-directed mutagenesis primer to generate FLAG/HA-MT 1303 GPC-G1116R |
| MT\_M1129I\_F | GAACCGGCATCAGCTGGAAT | Site-directed mutagenesis primer to generate FLAG/HA-MT 1303 GPC-M1129I |
| MT\_M1129I\_R | ATTCCAGCTGATGCCGGTTC | Site-directed mutagenesis primer to generate FLAG/HA-MT 1303 GPC-M1129I |
| MT\_G1116K\_F | CAGAGAGCATCATGAAGCTG | Site-directed mutagenesis primer to generate FLAG/HA-MT 1303 GPC-G1116K |
| MT\_G1116K\_R | GCTTCATGATGCTCTCTGATTTCCCGCTCACCAGGATCTT | Site-directed mutagenesis primer to generate FLAG/HA-MT 1303 GPC-G1116K |