

## Supplementary information, Table S4

Summary of C5a<sup>pep</sup> and BM213-mediated  $\beta$ -arrestin2 recruitment assay of C5aR1.

Mutation	EC <sub>50</sub> ( $\mu$ M)	Fold	<i>E</i> <sub>max</sub> (%WT)	n	EC <sub>50</sub> ( $\mu$ M)	Fold	<i>E</i> <sub>max</sub> (%WT)	n	Expression level (%WT)
	<b>C5a<sup>pep</sup></b>					<b>BM213</b>			
<b>C5aR1-WT</b>	1.99±0.11	1.00	100	6	59.95±5.68	1.00	100	6	100
<b>I91<sup>2.59</sup>A</b>	ND	ND	ND	3	-	-	-	3	88.18±0.41
<b>W102<sup>ECL1</sup>A</b>	ND	ND	ND	3	ND	ND	ND	3	98.82±2.048
<b>I116<sup>3.32</sup>F</b>	0.31±0.07	0.16	106.40±4.43	3	13.33±1.35	0.22	136.80±2.85	3	108.95±7.45

ND means no detectable due to the low signal. “-” means no measurement.