

## Supplemental Table 2 Metal binding sites of clostridial collagenases

### A) Zinc binding site of clostridial collagenases

ColH peptidase domain				ColT peptidase domain					ColG collagenase unit				
		- Inhibitor+ Inhibitor				- Inhibitor <sup>A</sup> - Inhibitor <sup>B</sup> + Inhibitor <sup>A</sup> + Inhibitor <sup>B</sup>					- Inhibitor + Inhibitor*		
<b>Resolution (Å)</b>		2.01	1.77	<b>Resolution (Å)</b>	1.69	1.69	2.05	2.05	<b>Resolution (Å)</b>	2.19	3.25		
<b>Zn<sup>2+</sup></b>	<b>Occ</b>	1.0	1.0	<b>Zn<sup>2+</sup></b>	<b>Occ</b>	1.0	1.0	1.0	1.0	<b>Zn<sup>2+</sup></b>	<b>Occ</b>	1.0	1.0
	<b>B-fac</b>	26.1	20.8		<b>B-fac</b>	33.8	20.5	34.0	38.1		<b>B-fac</b>	52.7	55.58
<b>His455</b>	<b>Dist</b>	2.03	2.06	<b>His465</b>	<b>Dist</b>	2.04	2.03	2.03	2.04	<b>His523</b>	<b>Dist</b>	2.09	2.08
	<b>B-fac</b>	25.7	20.3		<b>B-fac</b>	26.3	18.1	32.4	34.0		<b>B-fac</b>	53.8	63.03
<b>His459</b>	<b>Dist</b>	2.03	2.03	<b>His469</b>	<b>Dist</b>	2.03	2.03	2.03	2.03	<b>His527</b>	<b>Dist</b>	2.11	2.09
	<b>B-fac</b>	26.8	22.0		<b>B-fac</b>	17.0	16.7	29.5	33.7		<b>B-fac</b>	43.1	60.4
<b>Glu487</b>	<b>Dist</b>	1.99	2.00	<b>Glu499</b>	<b>Dist</b>	2.00	1.99	1.99	1.99	<b>Glu555</b>	<b>Dist</b>	2.00	2.09
	<b>B-fac</b>	24.2	21.2		<b>B-fac</b>	23.3	21.4	28.2	34.2		<b>B-fac</b>	57.1	85.0
<b>Asp421</b>	<b>Dist</b>	2.01	-	<b>H<sub>2</sub>O</b>	<b>Dist</b>	2.03	2.02			<b>H<sub>2</sub>O</b>	<b>Dist</b>	2.08	2.07
	<b>B-fac</b>	34.5	-		<b>B-fac</b>	37.3	24.6				<b>B-fac</b>	40.7	58.3
<b>IPI</b>	<b>Dist</b>	-	1.99	<b>IPI</b>	<b>Dist</b>	-	-	2.03   2.24	2.03	<b>IPI</b>	<b>Dist</b>	-	2.08
	<b>B-fac</b>	-	22.9		<b>B-fac</b>	-	-	42.5   34.5	44.7		<b>B-fac</b>	-	72.1

<sup>A,B</sup> Monomer A and B of the asymmetric unit.

\* Based on data published previously (7).

## Supplemental Table 2 Metal binding sites of clostridial collagenases

### B) Calcium binding sites of clostridial collagenases

ColH peptidase domain				ColT peptidase domain					ColG PKD-like domain		
		- Inhibitor+ Inhibitor				- Inhibitor <sup>A</sup> - Inhibitor <sup>B</sup> + Inhibitor <sup>A</sup> + Inhibitor <sup>B</sup>					
<b>Resolution (Å)</b>		2.01	1.77	<b>Resolution (Å)</b>	1.69	1.69	2.05	2.05	<b>Resolution (Å)</b>	0.99	
<b>Ca<sup>2+</sup></b>	<b>Occ</b>	1.0	1.0	<b>Ca<sup>2+</sup></b>	<b>Occ</b>	1.0	1.0	1.0	<b>Ca<sup>2+</sup></b>	<b>Occ</b>	1.0
	<b>B-fac</b>	25.1	19.1		<b>B-fac</b>	13.5	14.4	25.2	<b>B-fac</b>	5.8	
<b>Glu430</b>	<b>Dist</b>	2.21   2.43	2.34	<b>Glu440</b>	<b>Dist</b>	2.32	2.31	2.31	<b>Asn795</b>	<b>Dist</b>	2.43
	<b>B-fac</b>	27.2   26.4	20.8		<b>B-fac</b>	18.9	15.7	24.7	<b>B-fac</b>	7.5	
<b>Gly463</b>	<b>Dist</b>	2.36	2.32	<b>Gly473</b>	<b>Dist</b>	2.35	2.35	2.32	<b>Lys796</b>	<b>Dist</b>	2.36
	<b>B-fac</b>	23.9	19.8		<b>B-fac</b>	13.7	15.2	22.5	<b>B-fac</b>	5.8	
<b>Val467</b>	<b>Dist</b>	2.37	2.31	<b>Ile477</b>	<b>Dist</b>	2.35	2.34	2.32	<b>Asp823</b>	<b>Dist</b>	2.42   2.43
	<b>B-fac</b>	25.1	20.9		<b>B-fac</b>	14.7	14.3	22.9	<b>B-fac</b>	8.2   7.5	
<b>Gly469</b>	<b>Dist</b>	2.35	2.31	<b>Gly479</b>	<b>Dist</b>	2.34	2.35	2.32	<b>Asp825</b>	<b>Dist</b>	2.29
	<b>B-fac</b>	24.9	22.6		<b>B-fac</b>	17.7	15.9	24.8	<b>B-fac</b>	7.3	
<b>H<sub>2</sub>O_1</b>	<b>Dist</b>	2.18	2.36	<b>H<sub>2</sub>O_1</b>	<b>Dist</b>	2.36	2.39	2.35	<b>Asp864</b>	<b>Dist</b>	2.35
	<b>B-fac</b>	21.7	20.5		<b>B-fac</b>	16.5	13.4	27.1	<b>B-fac</b>	5.4	
<b>H<sub>2</sub>O_2</b>	<b>Dist</b>	2.67	2.41	<b>H<sub>2</sub>O_2</b>	<b>Dist</b>	2.40	2.40	2.35	<b>H<sub>2</sub>O</b>	<b>Dist</b>	2.43
	<b>B-fac</b>	24.4	18.2		<b>B-fac</b>	15.0	13.8	22.7	<b>B-fac</b>	8.5	

<sup>A,B</sup> Monomer A and B of the asymmetric unit.