

**Table S3.** Divalent metal ion contents in the purified human and mouse SMP30/GNL

	Mouse <sup>*1</sup>			Human <sup>*1</sup>		
Sample <sup>*2</sup>	Purified	Dialyzed	Chelated	Purified	Dialyzed	Chelated
Protein conc. (mg/ml)	1.2	0.5	0.8	1.2	1.2	1.2
Concentration ( $\mu\text{M}$ ) <sup>*3</sup>						
Mg <sup>2+</sup>	7.0	N.D.	0.29	5.4	N.D.	N.D.
Ca <sup>2+</sup>	18.0	0.75	0.97	17.0	1.85	0.87
Mn <sup>2+</sup>	0.35	0.04	N.D. <sup>*4</sup>	0.16	0.27	N.D.
Zn <sup>2+</sup>	0.55	0.55	N.D.	1.10	N.D.	N.D.
Metal ions per purified SMP30/GNL (%) <sup>*5</sup>						
Mg <sup>2+</sup>	19	N.D.	1	15	N.D.	N.D.
Ca <sup>2+</sup>	51	5	4	46	3.9	1.9
Mn <sup>2+</sup>	1.0	0.2	N.D.	0.5	0.6	N.D.
Zn <sup>2+</sup>	1.5	3.7	N.D.	3.0	N.D.	N.D.

\*1 Mouse: Mouse SMP30/GNL, Human: Human SMP30/GNL

\*2 Purified: purified protein, Dialyzed: dialyzed protein without chelating reagents., Chelated: dialyzed protein with chelating reagents.

\*3 Concentrations of the divalent metal ions in the sample solutions analyzed by ICP-MS.

\*4 N.D. indicates that the concentration of divalent metal ions was less than 10 ppb, which was the lower limit of detection.

\*5 Percentages of divalent metal ions calculated on a molar basis. Data are expressed as  $\mu\text{mol}$  of divalent metal ions per  $\mu\text{mol}$  of purified mouse or human SMP30/GNL.