

72 Table S3. Pearson correlation coefficient (n = 30) between meat quality traits and metabolites  
 73 in Hanwoo and Chikso beef cuts.

Item	pH	CIE $L^*$	CIE $a^*$	CIE $b^*$	SF	MFI
<i>Rump cut</i>						
Acetate	-0.40	-0.01	-0.41	-0.45	-0.17	<b>0.60</b>
Alanine	-0.46	-0.12	<b>-0.57</b>	<b>-0.62</b>	-0.31	<b>0.73</b>
Anserine	-0.28	0.45	-0.31	-0.14	<b>-0.60</b>	0.27
Asparagine	-0.48	-0.02	<b>-0.71</b>	<b>-0.64</b>	-0.36	<b>0.80</b>
Carnosine	-0.13	0.40	-0.44	-0.16	<b>-0.57</b>	0.23
Creatine	0.07	-0.23	-0.03	-0.21	0.01	0.23
Ethanol	-0.35	-0.44	-0.42	<b>-0.53</b>	0.27	0.38
Formate	<b>-0.55</b>	0.17	-0.33	-0.28	0.03	0.32
Fumarate	<b>-0.53</b>	-0.08	-0.38	-0.47	-0.23	<b>0.54</b>
Glutamate	-0.46	-0.07	<b>-0.74</b>	<b>-0.67</b>	-0.39	<b>0.78</b>
Glycine	-0.08	-0.07	-0.31	-0.33	-0.21	0.17
Hypoxanthine	-0.50	0.32	-0.49	-0.42	-0.50	<b>0.62</b>
IMP	<b>0.64</b>	-0.30	<b>0.62</b>	0.48	<b>0.55</b>	<b>-0.65</b>
Inosine	0.14	-0.42	-0.25	-0.41	-0.24	0.28
Isoleucine	-0.48	-0.07	<b>-0.74</b>	<b>-0.66</b>	-0.40	<b>0.76</b>
Lactate	-0.14	-0.14	-0.17	-0.32	-0.12	0.38
L-Carnitine	0.00	-0.33	-0.16	-0.37	0.11	0.42
Leucine	-0.47	-0.08	<b>-0.77</b>	<b>-0.70</b>	-0.41	<b>0.81</b>
Methionine	-0.45	-0.10	<b>-0.76</b>	<b>-0.71</b>	-0.42	<b>0.82</b>
N,N-Dimethylglycine	-0.21	-0.01	-0.30	-0.32	-0.12	0.46

Niacinamide	-0.23	-0.16	<b>-0.59</b>	<b>-0.61</b>	<b>-0.51</b>	<b>0.65</b>
Phenylalanine	<b>-0.54</b>	0.00	<b>-0.80</b>	<b>-0.69</b>	-0.43	<b>0.83</b>
Taurine	0.01	0.00	0.06	0.00	0.05	0.02
Tyrosine	-0.29	-0.17	<b>-0.53</b>	<b>-0.54</b>	-0.34	<b>0.59</b>
Uridine	<b>-0.55</b>	0.17	<b>-0.67</b>	<b>-0.53</b>	<b>-0.53</b>	<b>0.80</b>
Valine	<b>-0.52</b>	-0.05	<b>-0.77</b>	<b>-0.70</b>	-0.44	<b>0.86</b>
o-Acetylcarnitine	0.17	-0.09	0.39	0.36	0.45	<b>-0.66</b>
<hr/> <i>Loin cut</i> <hr/>						
Acetate	<b>-0.78</b>	0.08	-0.41	-0.29	-0.28	0.46
Alanine	<b>-0.68</b>	-0.03	<b>-0.62</b>	-0.49	-0.23	0.45
Anserine	0.22	0.02	0.13	0.02	0.33	-0.17
Asparagine	<b>-0.82</b>	-0.10	<b>-0.63</b>	<b>-0.51</b>	-0.31	<b>0.63</b>
Carnosine	0.06	-0.06	-0.37	-0.18	0.35	-0.01
Creatine	0.27	0.15	-0.19	0.00	0.23	-0.30
Ethanol	-0.39	-0.02	-0.23	-0.19	0.24	0.39
Formate	<b>-0.73</b>	0.05	-0.38	-0.28	-0.24	0.40
Fumarate	<b>-0.76</b>	-0.03	-0.41	-0.34	-0.23	0.31
Glutamate	<b>-0.81</b>	0.01	<b>-0.55</b>	-0.41	-0.44	<b>0.60</b>
Glycine	0.10	0.24	0.21	0.17	-0.12	-0.18
Hypoxanthine	<b>-0.54</b>	0.16	<b>-0.50</b>	-0.39	-0.39	0.20
IMP	0.47	-0.07	0.19	0.30	<b>0.69</b>	-0.26
Inosine	<b>0.57</b>	-0.07	0.22	0.27	0.41	-0.35
Isoleucine	<b>-0.79</b>	-0.19	<b>-0.67</b>	<b>-0.58</b>	-0.37	<b>0.56</b>
Lactate	-0.27	0.11	-0.47	-0.22	0.08	-0.04

L-Carnitine	-0.17	-0.23	<b>-0.54</b>	-0.41	0.08	<b>0.59</b>
Leucine	<b>-0.79</b>	-0.15	<b>-0.71</b>	<b>-0.59</b>	-0.40	<b>0.61</b>
Methionine	<b>-0.64</b>	-0.09	<b>-0.60</b>	<b>-0.53</b>	-0.20	<b>0.56</b>
N,N-Dimethylglycine	-0.47	0.17	-0.48	-0.24	-0.11	0.31
Niacinamide	<b>0.58</b>	-0.17	-0.03	-0.05	0.31	-0.20
Phenylalanine	<b>-0.79</b>	-0.19	<b>-0.72</b>	<b>-0.59</b>	-0.39	<b>0.62</b>
Taurine	0.06	-0.03	-0.02	0.07	-0.17	-0.16
Tyrosine	-0.49	-0.45	<b>-0.52</b>	-0.46	-0.29	<b>0.73</b>
Uridine	-0.36	0.13	-0.04	-0.09	-0.32	0.13
Valine	<b>-0.83</b>	-0.10	<b>-0.67</b>	<b>-0.51</b>	-0.38	<b>0.65</b>
o-Acetylcarnitine	0.39	-0.06	0.05	0.10	0.30	-0.37

74 Pearson correlation coefficients with bold letters indicate that the coefficients showed  $|r| > 0.05$

75 and  $p < 0.01$ .

76 MFI, myofibrillar fragmentation index; SF, shear force.