

# Enzyme Data

<b>BCC-Nr.</b>	<b>010</b>																																																										
<b>Enzyme</b>	<b>Lipase</b>																																																										
<b>EC-No.</b>	<b>3.1.1.3</b>																																																										
<b>T<sub>opt</sub></b>	75°C, recommendend 40-85°C																																																										
<b>pH<sub>opt</sub></b>	8.0, recommended 6.5-10.0																																																										
<b>Stability</b>	t <sub>1/2</sub> (85°C) = 2 h																																																										
<b>Activity and substrate specificity</b>	12 U/mg, K <sub>M</sub> 1.08 (pNP-palmitate),																																																										
<b>Additives</b>	<u>Activity in organic solvents</u> <table border="1"><thead><tr><th><u>Solvent</u></th><th><u>Concentration</u></th><th><u>Rel. Activity [%]</u></th></tr></thead><tbody><tr><td rowspan="3">tert-Butanol</td><td>25 %</td><td>117</td></tr><tr><td>50 %</td><td>113</td></tr><tr><td>99 %</td><td>113</td></tr><tr><td rowspan="3">Ethanol</td><td>25 %</td><td>100</td></tr><tr><td>50 %</td><td>107</td></tr><tr><td>99 %</td><td>76</td></tr><tr><td rowspan="3">Acetonitrile</td><td>25 %</td><td>110</td></tr><tr><td>50 %</td><td>109</td></tr><tr><td>99 %</td><td>110</td></tr><tr><td rowspan="3">Isopropanol</td><td>25 %</td><td>81</td></tr><tr><td>50 %</td><td>148</td></tr><tr><td>99 %</td><td>96</td></tr><tr><td rowspan="3">Pyridine</td><td>25 %</td><td>109</td></tr><tr><td>50 %</td><td>100</td></tr><tr><td>99 %</td><td>93</td></tr><tr><td rowspan="6">DMSO</td><td>1 %</td><td>100</td></tr><tr><td>5 %</td><td>105</td></tr><tr><td>10%</td><td>102</td></tr><tr><td>25 %</td><td>110</td></tr><tr><td>50 %</td><td>106</td></tr><tr><td>99 %</td><td>0</td></tr><tr><td rowspan="3">Acetone</td><td>25 %</td><td>97</td></tr><tr><td>50 %</td><td>102</td></tr><tr><td>99 %</td><td>105</td></tr></tbody></table>	<u>Solvent</u>	<u>Concentration</u>	<u>Rel. Activity [%]</u>	tert-Butanol	25 %	117	50 %	113	99 %	113	Ethanol	25 %	100	50 %	107	99 %	76	Acetonitrile	25 %	110	50 %	109	99 %	110	Isopropanol	25 %	81	50 %	148	99 %	96	Pyridine	25 %	109	50 %	100	99 %	93	DMSO	1 %	100	5 %	105	10%	102	25 %	110	50 %	106	99 %	0	Acetone	25 %	97	50 %	102	99 %	105
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	Dimethylformamide	25 %	101
		50 %	96
		99 %	80
	Methanol	25 %	105
		50 %	101
		99 %	56
	Hexadecane	99%	79
	Heptane	99 %	76
	n-Hexane	99%	77
	Isooctane	99 %	68
	Amyl alcohol	99 %	39
	n-Decyl alcohol	99 %	34
Toluol	99 %	18	
Benzene	99 %	0	

<b><u>Influence of activators and inhibitors</u></b>		
Compound	Concentration	Rel. Activity [%]
PMSF	0.1 mM	21
	1.0 mM	2
Pefablock	0.1 mM	2
	1.0 mM	0
CHAPS	1% (v/v)	124
	5% (v/v)	139
	10% (v/v)	129