

Enzyme Data

BCC-Nr.	012																																																										
Enzyme	Lipase																																																										
EC-No.	3.1.1.3																																																										
T_{opt}	75°C, recommendend 40-85°C																																																										
pH_{opt}	8.0, recommended 6.5-10.0																																																										
Stability	t _{1/2} (85°C) = 90 min																																																										
Activity and substrate specificity	13 U/mg, K _M 1.14 (pNP-palmitate),																																																										
Additives	<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>115</td></tr><tr><td>99 %</td><td>100</td></tr><tr><td rowspan="3">Ethanol</td><td>25 %</td><td>96</td></tr><tr><td>50 %</td><td>111</td></tr><tr><td>99 %</td><td>79</td></tr><tr><td rowspan="3">Acetonitrile</td><td>25 %</td><td>108</td></tr><tr><td>50 %</td><td>111</td></tr><tr><td>99 %</td><td>113</td></tr><tr><td rowspan="3">Isopropanol</td><td>25 %</td><td>102</td></tr><tr><td>50 %</td><td>125</td></tr><tr><td>99 %</td><td>104</td></tr><tr><td rowspan="3">Pyridine</td><td>25 %</td><td>103</td></tr><tr><td>50 %</td><td>101</td></tr><tr><td>99 %</td><td>94</td></tr><tr><td rowspan="6">DMSO</td><td>1 %</td><td>104</td></tr><tr><td>5 %</td><td>105</td></tr><tr><td>10%</td><td>102</td></tr><tr><td>25 %</td><td>106</td></tr><tr><td>50 %</td><td>102</td></tr><tr><td>99 %</td><td>7</td></tr><tr><td rowspan="3">Acetone</td><td>25 %</td><td>77</td></tr><tr><td>50 %</td><td>99</td></tr><tr><td>99 %</td><td>103</td></tr></tbody></table>	<u>Solvent</u>	<u>Concentration</u>	<u>Rel. Activity [%]</u>	tert-Butanol	25 %	117	50 %	115	99 %	100	Ethanol	25 %	96	50 %	111	99 %	79	Acetonitrile	25 %	108	50 %	111	99 %	113	Isopropanol	25 %	102	50 %	125	99 %	104	Pyridine	25 %	103	50 %	101	99 %	94	DMSO	1 %	104	5 %	105	10%	102	25 %	106	50 %	102	99 %	7	Acetone	25 %	77	50 %	99	99 %	103
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	Dimethylformamide	25 %	107
		50 %	102
		99 %	103
	Methanol	25 %	89
		50 %	96
		99 %	100
	Hexadecane	99%	46
	Heptane	99 %	86
	n-Hexane	99%	81
	Isooctane	99 %	73
	Amylalcohol	99 %	63
	n-Decyl alcohol	99 %	28
Toluol	99 %	21	
Benzene	99 %	7	

<u>Influence of activators and inhibitors</u>		
Compound	Concentration	Rel. Activity [%]
PMSF	0.1 mM	22
	1.0 mM	4
Pefablock	0.1 mM	0
	1.0 mM	0
CHAPS	1% (v/v)	128
	5% (v/v)	141
	10% (v/v)	132