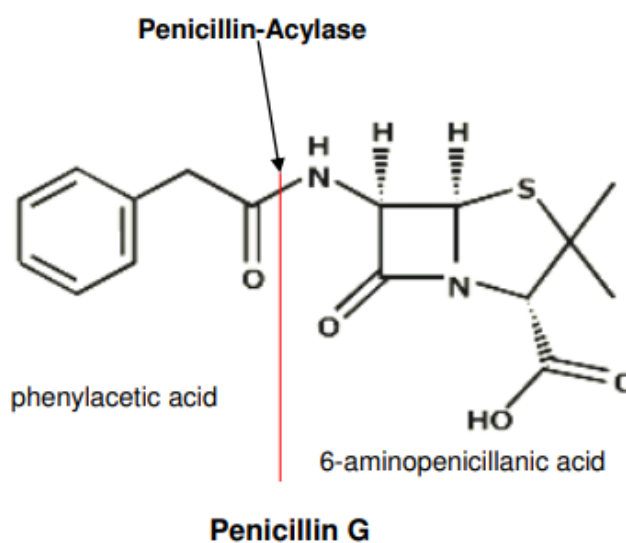


Penicillin-Acylase

Penicillin amidohydrolase, E.C. 3.5.1.11

Description: Cleavage of Penicillin G into 6-aminopenicillanic acid (6-APA) and phenylacetic acid. Synthesis of unnatural penicillin by coupling 6-aminopenicillanic acid with a selected side chain (e.g. Methicillin, Ampicillin, Pheneticillin)

Catalysed reaction:



Origin: *genetically modified Escherichia coli*

Application: Semi synthetic production of several penicillins

Activity: > 750 U/ mL
(Method: ASA Spezialenzyme GmbH)

Specific activity: > 10 U/ mg Protein

Parameter:	pH	Optimum: 6.7 - 6.8
		Optimum: 6.3 - 6.4 by preparative isoelectric focusing
	Temperature	Optimum: 54°C

Reaction:	Hydrolysis of 6-nitro-3-(phenylacetamide) benzoic acid: pH 7.5 Hydrolysis of Penicillin G: pH 8.1
Inhibitors:	Phenylacetic acid (competitive, $K_i = 200$ mM) 6-aminopenicillanic acid (not competitive, $K_i = 15$ mM)
Article-no.:	2605
Form of delivery:	yellow to brown liquid with typical odour
Stability:	Stable at -20°C. For months stable at pH 5 - 8 and at ambient temperature. Fast loss of activity after treatment with organic solvents as well as after lyophilisation. An incubation for 20 minutes at pH 5 and 50°C does not lead to a loss of activity.
Storage:	-20°C
Literature:	Kutzbach C., Rauenbusch E.: Hoppe-Seyler's Z. Physiol. Chem. 354, 45 (1974) Mahajan P. B.: Appl. Biochem. and Biotechn. Vol. 9. 537 (1984) Savidge T. A., Cole: M. in Methods in Enzymology Vol. 43. 705, Academic Press, New York – London (1975)