

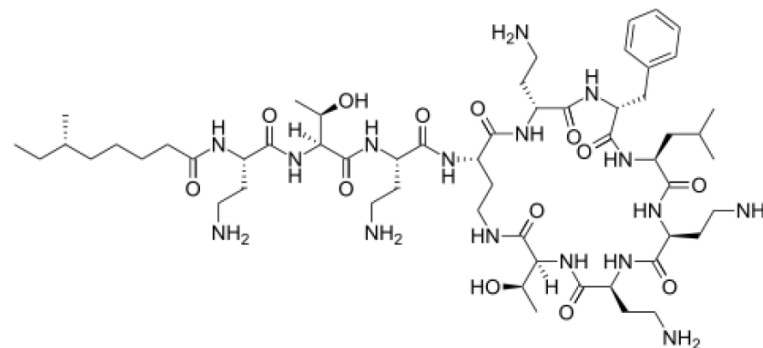


P6809
Polymyxin B Sulfate

Synonyms: Polymixin, Polymixin B
CAS: 1405-20-5
Formula: $C_{55}H_{96}N_{16}O_{13} \cdot 2H_2SO_4$
Mol. Weight: 1385.61

Properties

Form: Powder
Appearance: White to Off-White Powder
Solubility: Soluble in Water
Application: Phytopathology, Seed Testing, Microbiology
Storage Temp: 2-6°C
Typical Working Concentration: Varies with application, should be determined by end user.



Application Notes

Active against gram negative bacteria. Acts against microorganisms by binding to and interfering with the permeability of the cytoplasmic membrane.

Can be used with PhytoSelect Basal Medium (Prod # P6800) and additional antibiotics to select for *Acidovorax avenae* and *Ralstonia solanacearum* (Kawanishi 2011). See table on next page for media formulation details.

References

- Kawanishi T, T. Shiraishi, Y. Okano, K. Sugawara, M. Hashimoto, K Maejima, K Komatsu, S Kakizawa, Y Yamaji, H Hamamoto, K Oshima, S Namba (2011) New Detection Systems of Bacteria Using Highly Selective Media Designed by SMART: Selective Medium-Design Algorithm Restricted by Two Constraints. PLoS ONE Volume 6, Issue 1.
- Morrison DC, Jacobs DM (1976) Binding of polymyxin B to the lipid A portion of bacterial lipopolysaccharides. *Immunochemistry*.13(10):813-8.
- Yuan Z, Tam VH: Polymyxin B: a new strategy for multidrug-resistant Gram-negative organisms. *Expert Opin Investig Drugs*. 2008 May;17(5):661-8. Pubmed
- Zavascki AP, Goldani LZ, Li J, Nation RL: Polymyxin B for the treatment of multidrug-resistant pathogens: a critical review. *J Antimicrob Chemother*. 2007 Dec;60(6):1206-15. Epub 2007 Sep 17. Pubmed

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Composition of the selective media developed by Kawanishi et al (2011). Amounts listed are to make 1L of selection medium.

SMART-Bgl medium			SMART-Aac medium			SMART-Pca medium		
Prod #	For <i>Burkholderia glumae</i>		Prod #	For <i>Acidovorax avenae</i>		Prod #	For <i>Pectobacterium carotovorum</i>	
S744	D-sorbitol	1 g	M539	L-methionine	1 g	T7968	Trehalose	1 g
P6800	PhytoSelect Basal Medium	24.93 g	P6800	PhytoSelect Basal Medium	24.93 g	P6800	PhytoSelect Basal Medium	24.93 g
C1989 C1796	Cycloheximide: Powder <u>or</u> Solution (100 mg/mL)	50 mg 0.5 mL	C1989 C1796	Cycloheximide: Powder <u>or</u> Solution (100 mg/mL)	50 mg 0.5 mL	C1989 C1796	Cycloheximide: Powder <u>or</u> Solution (100 mg/mL)	50 mg 0.5 mL
A116 A1116	Ampicillin: Powder <u>or</u> Solution (100 mg/mL)	10 mg 0.1 mL	A116 A1116	Ampicillin: Powder <u>or</u> Solution (100 mg/mL)	10 mg 0.1 mL	H276 H3818	Cetrimonium (CTAB): Powder <u>or</u> Solution (100 mg/mL)	10 mg 0.10 mL
H276 H3818	Cetrimonium (CTAB): Powder <u>or</u> Solution (100 mg/mL)	10 mg 0.10 mL	H276 H3818	Cetrimonium (CTAB): Powder <u>or</u> Solution (100 mg/mL)	10 mg 0.10 mL	N/A N/A	Tyrothricin: Powder <u>or</u> Solution (10 mg/mL)	10 mg 1.0 mL
C252 C2010	Chloramphenicol: Powder <u>or</u> Solution (10 mg/mL)	10 mg 1.0 mL	P6809 P6719	Polymixin B: Powder <u>or</u> Solution (10 mg/mL)	10 mg 1.0 mL			

SMART-Rso medium			SMART-Xca medium		
Prod #	For <i>Ralstonia solanacearum</i>		Prod #	For <i>Xanthomonas campestris</i>	
M562	D-Mannitol	1 g	G503	Glycine	1 g
P6800	PhytoSelect Basal Medium	24.93 g	P6800	PhytoSelect Basal Medium	24.93 g
C1989 C1796	Cycloheximide: Powder <u>or</u> Solution (100 mg/mL)	50 mg 0.5 mL	C1989 C1796	Cycloheximide: Powder <u>or</u> Solution (100 mg/mL)	50 mg 0.5 mL
C252 C2010	Chloramphenicol: Powder <u>or</u> Solution (10 mg/mL)	10 mg 1.0 mL	C1970 C2112	Cephalexin: Powder <u>or</u> Solution (100 mg/mL)	10 mg 0.10 mL
P6809 P6719	Polymixin B: Powder <u>or</u> Solution (10 mg/mL)	10 mg 1.0 mL	P777 P6767	Penicillin G: Powder <u>or</u> Solution (10 mg/mL)	10 mg 1.0 mL

Reference:

Kawanishi T, T Shiraishi, Y Okano, K Sugawara, M Hashimoto, K Maejima, K Komatsu, S Kakizawa, Y Yamaji, H Hamamoto, K Oshima, S Namba (2011) New Detection Systems of Bacteria Using Highly Selective Media Designed by SMART: Selective Medium-Design Algorithm Restricted by Two Constraints. PLoS ONE Volume 6, Issue 1.