

Detection of Glycosaminoglycans by Polyacrylamide Gel Electrophoresis and Silver Staining

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Materials

Name	Company	Catalog Number	Comments
Accuspin Micro17 benchtop microcentrifuge	thermoFisher Scientific	13-100-675	Any benchtop microcentrifuge/rotor combination capable of 14000 xG is appropriate
Acrylamide (solid)	thermoFisher Scientific	BP170-100	Electrophoresis grade
Actinase E	Sigma Aldrich	P5147	Protease mix from <i>S. griseus</i>
Alcian Blue 8GX (solid)	thermoFisher Scientific	AC400460100	
Ammonium acetate (solid)	thermoFisher Scientific	A639-500	Molecular biology grade
Ammonium hydroxide (liquid)	thermoFisher Scientific	A669S-500	certified ACS
Ammonium persulfate (solid)	thermoFisher Scientific	BP179-25	electrophoresis grade
Barnstead GenPure Pro Water Purification System	ThermoFisher Scientific	10-451-217PKG	Any water deionizing/ purification system is an acceptable substitute
Boric acid (solid)	thermoFisher Scientific	A73-500	Molecular biology grade
Bromphenol blue (solid)	thermoFisher Scientific	B392-5	
Calcium acetate (solid)	ThermoFisher Scientific	18-609-432	Molecular biology grade
Calcium chloride (solid)	ThermoFisher Scientific	AC349610250	Molecular biology grade
CHAPS detergent (3-((3-cholamidopropyl)dimethylammonio)-1-propanesulfonate)	ThermoFisher Scientific	28299	
Chondroitinase ABC	Sigma Aldrich	C3667	
Criterion empty cassette for PAGE (1.0mm thick, 12+2 wells)	Bio-Rad	3459901	Any 1.0mm thick PAGE casting cassette system will suffice
Criterion PAGE Cell system (cell and power supply)	Bio-Rad	1656019	any comparable vertical gel PAGE system will work)
Dichloromethane (liquid)	thermoFisher Scientific	AC610931000	certified ACS
EDTA disodium salt (solid)	thermoFisher Scientific	02-002-786	Molecular biology grade
Glacial acetic acid (liquid)	thermoFisher Scientific	A35-500	Certified ACS
Glycine (solid)	thermoFisher Scientific	G48-500	Electrophoresis grade
Heparanase I/III	Sigma Aldrich	H3917	From <i>Flavobacterium heparinum</i>

Heparin derived deca-saccharide (dp10)	galen scientific	HO10	
Heparin derived hexa-saccharide (dp6)	Galen scientific	HO06	
Heparin derived oligo-saccharide (dp20)	galen scientific	HO20	
Hydrochloric acid (liquid)	thermoFisher Scientific	A466-250	
Lyophilizer	Labconco	7752020	Any lyophilizer that can achieve -40C and 0.135 Torr will work; can also be replaced with rotational vacuum concentrator
Methanol (liquid)	thermoFisher Scientific	A412-500	Certified ACS
Molecular Imager Gel Doc XR System	Bio-Rad	170-8170	Any comparable gel imaging system is an acceptable substitute
N,N'-methylene-bis-acrylamide (solid)	thermoFisher Scientific	BP171-25	Electrophoresis grade
Phenol red (solid)	thermoFisher Scientific	P74-10	Free acid
Q Mini H Ion Exchange Column	Vivapure	VS-IX01QH24	Ion exchange column must have minimum loading volume of 0.4mL, working pH of 2-12, and selectivity for ionic groups with pKa of 11
Silver nitrate (solid)	thermoFisher Scientific	S181-25	certified ACS
Sodium Acetate (solid)	ThermoFisher Scientific	S210-500	Molecular biology grade
Sodium chloride (solid)	thermoFisher Scientific	S271-500	Molecular biology grade
Sodium hydroxide (solid)	thermoFisher Scientific	S392-212	
Sucrose (solid)	thermoFisher Scientific	BP220-1	Molecular biology grade
TEMED (N,N,N',N'-tetramethylethylenediamine)	thermoFisher Scientific	BP150-20	Electrophoresis grade
Tris base (solid)	thermoFisher Scientific	BP152-500	Molecular biology grade
Ultra Centrifugal filters, 0.5mL, 3000 Da molecular weight cutoff	Amicon	UFC500324	Larger volume filter units may be used, depending on sample size.
Urea (solid)	ThermoFisher Scientific	29700	
VacuFuge Plus	Eppendorf	22820001	Any rotational vacuum concentrator will work; can be replaced with lyophilizer
Vacuum filter unit, single use, 0.22µm pore PES, 500mL volume	thermoFisher Scientific	569-0020	Alternative volumes and filter materials acceptable