

Materials List for:

# Purification of a High Molecular Mass Protein in *Streptococcus Mutans*

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## Materials

Name	Company	Catalog Number	Comments
Agarose	Nippon Genetics	NE-AG02	For agarose gel electrophoresis
Anaeropack	Mitsubishi Gas Chemical	A-03	Anaerobic culture system
Anti-His-Tag monoclonal antibody	MBL	D291-7	HRP-conjugated
BCA protein assay kit	Thermo Fisher Scientific	23227	Measurement of protein concentration
Brain heart infusion broth	Becton, Dickinson	237500	Bacterial culture medium
CBB R-250	Wako	031-17922	For biofilm staining
Centrifugal ultrafiltration unit	Sartorius	VS2032	Buffer replacement and protein concentration
Centrifuge	Kubota	7780II	
Chromatographic column	Bio-Rad	7321010	For IMAC
Dialysis membrane clamp	Fisher brand	21-153-100	
Dialysis tubing	As One	2-316-06	
DNA polymerase	Takara	R045A	High-fidelity DNA polymerase
DNA sequencing	Eurofins Genomics		
ECL substrate	Bio-Rad	170-5060	For western blotting
EDTA (0.5 M pH 8.0)	Wako	311-90075	Tris-EDTA buffer preparation
Electroporation cuvette	Bio-Rad	1652086	0.2 cm gap
Electroporator	Bio-Rad	1652100	
EtBr solution	Nippon Gene	315-90051	For agarose gel electrophoresis
Gel band cutter	Nippon Genetics	FG-830	
Gel extraction kit	Nippon Genetics	FG-91202	DNA extraction from agarose gel
Imager	GE Healthcare	29083461	For SDS-PAGE and western blotting
Imidazole	Wako	095-00015	Binding buffer and elution buffer preparation
Incubator	Nippon Medical & Chemical Instruments	EZ-022	Temperature setting: 4 °C
Incubator	Nippon Medical & Chemical Instruments	LH-100-RDS	Temperature setting: 37 °C
Membrane filter	Merck Millipore	JGWP04700	0.2 µm diameter
Microcentrifuge	Kubota	3740	
NaCl	Wako	191-01665	Preparation of binding buffer and elution buffer
NaH <sub>2</sub> PO <sub>4</sub> ·2H <sub>2</sub> O	Wako	192-02815	Preparation of binding buffer and elution buffer

NaOH	Wako	198-13765	Preparation of binding buffer and elution buffer
(NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub>	Wako	015-06737	Ammonium sulfate precipitation
Ni-charged resin	Bio-Rad	1560133	For IMAC
PCR primers	Eurofins Genomics	Custom-ordered	
Protein standard	Bio-Rad	161-0381	For SDS-PAGE and western blotting
Solvent filtration apparatus	As One	FH-1G	
Spectinomycin	Wako	195-11531	Antibiotics; use at 100 µg/mL
Sterile syringe filter	Merckmillipore	SLGV004SL	0.22 µm diameter
<i>Streptococcus mutans</i> Δ <i>gtfC</i>	Stock strain in the lab.		<i>gtfC</i> replaced with <i>spc<sup>r</sup></i>
<i>Streptococcus mutans</i> UA159	Stock strain in the lab.		<i>S. mutans</i> ATCC 700610, Wild-type strain
Sucrose	Wako	196-00015	For biofilm development
TAE (50 × )	Nippon Gene	313-90035	For agarose gel electrophoresis
Thermal cycler	Bio-Rad	PTC-200	
Tris-HCl (1 M, pH 8.0)	Wako	314-90065	Tris-EDTA buffer preparation