

ProteoSave™

For your precious
sample preservation



When biological samples are incubated or stored in standard tube or plate, biological materials and its activities can be lost because of adsorption to the plastic surface. This is a serious concern for researchers working with precious proteins, antibodies and peptides.

ProteoSave™ is specially designed for reducing biological samples adsorption to the plastic surface. The surface of ProteoSave™ is coated ultra-hydrophilic polymer. It eliminates any protein denaturing and adsorption (Fig.1, Fig.2) which could be due to surface influence. Also, the coated polymer is bound on the surface covalently, so eluted materials from the surface is minuscule. ProteoSave™ is shown to be the most suitable tube/plate for your precious biological sample preservation.

Features of ProteoSave™

- Reduction of the adsorption of proteins, peptides and cells
- Elution of materials minuscule due to covalently attachment of ultra hydrophilic polymer to surface
- Resistance to organic solvents, detergents and heat (boiling at 100°C 10min.)
- Sterilized products are suitable for the preservation of cell products, additives and freeze

Principle

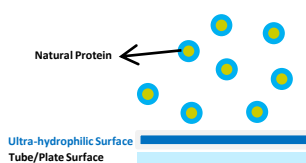
- The surface of tubes and wells with high density of hydroxyl groups prevents non-specific binding of proteins, peptides and cells to the surface. (Fig. 1) The coated polymer is bound on the surface covalently, thus elution of such materials from the surface is minuscule.

Application

- Valued sample preservation-Protein, Antibody, Vaccine etc.
- Protein assay- Enzyme catalysis (example Fig.3)
- Preparation of dilution series

Ultra-hydrophilic Surface of ProteoSave™

- ❖ Prevent protein adsorption on the surface
- ❖ Keep protein structure and function



Hydrophobic Surface

- ❖ Cause protein adsorption on the surface
- ❖ Cause protein denaturation and lose the function of protein

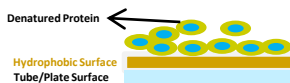


Figure 1. Features of Ultra-hydrophilic surface of ProteoSave™ comparing with hydrophobic surface

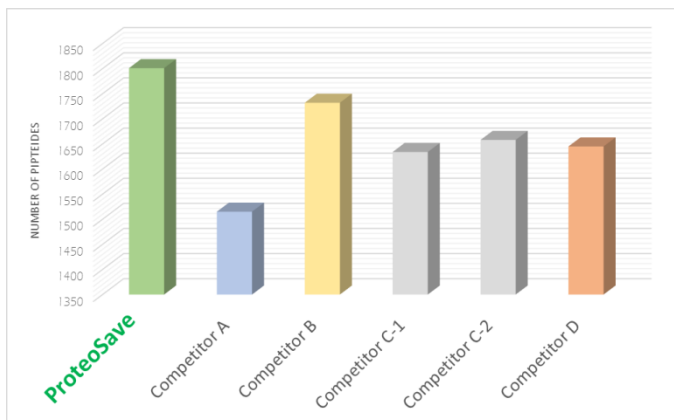


Figure 2. The number of peptides detected by nanoLC-Ultra 2D with TripleTOF®5600 from Hep3B digested extracts. (Data Courtesy of Masahiro Kamita, Ph.D., National Cancer Center Research Institute, Chemotherapy and Clinical Research)

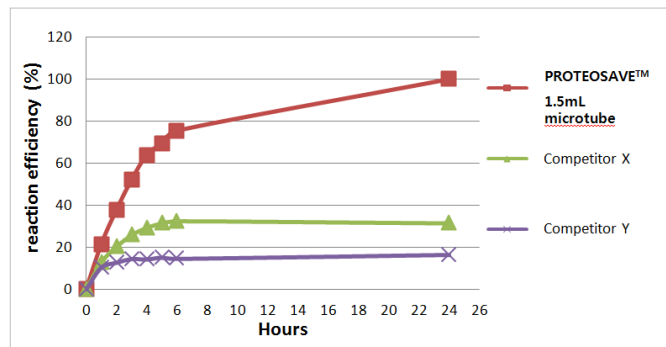


Figure 3. Hydrolytic reaction efficiency of Glycosynthases Endo-M. (Data: Courtesy of Hiroki Shimizu, Ph.D., Senior researcher of Bioproduction Research Institute, National Institute of Advanced Industrial Science and Technology (AIST))

—Methods & Material—

- Reaction Containers: PROTEOSAVE™ 1.5mL microtube, Competitor X, Competitor Y
- Reaction reagent: SGF11 3mM(0.43mg) (TOKYO CHEMICAL INDUSTRY CO., LTD.), Phosphate buffer(pH7.0) 50mM, Endo-M 10mU/mL(0.5mU) (No. A1651, TOKYO CHEMICAL INDUSTRY CO., LTD.)
- Total Volume: 50 μ L, Temperature: 30°C
- Reaction timeslot (hours): 1, 2nd, 3rd, 4th, 5th, 6th, 24th
- Preparation for HPLC Analysis: Prepare 5 μ L \rightarrow Add 5 μ L 8M Guanidine \rightarrow Take 8 μ L for HPLC analysis

Lineup of ProteoSave™

- ❑ 0.5 mL micro tube
- ❑ 1.5 mL micro tube
- ❑ 0.5 mL slim tube (Screw cap)
- ❑ 1.5 mL slim tube (Screw cap)
- ❑ 15 mL conical tube
- ❑ 50 mL conical tube
- ❑ 96-wells, flat bottom plate
- ❑ 96-wells, round bottom plate
- ❑ 96-deep wells, round bottom plate
- ❑ 96-wells, black, flat bottom plate
- ❑ 384-wells, V bottom plate

➤ Organic solvent resistance

	1 hour			5 hours		
	10%	50%	100%	10%	50%	100%
Methanol	Y	Y	Y	Y	Y	Y
Ethanol	Y	Y	Y	Y	Y	Y
2-propanol	Y	Y	Y	Y	Y	Y
Glycerol	Y	-	-	Y	-	-
Acetonitrile	Y	Y	Y	Y	Y	Y
Acetone	Y	Y	Y	-	-	-
DMSO	Y	-	-	-	-	-
2-mercaptoethanol	Y	-	-	Y	-	-

➤ Heat/cold resistance

	10min	30min	24hours	6months
120°C	-	N	-	-
100°C	Y	-	-	-
60°C	Y	-	Y	-
40°C	Y	-	Y	-
-4°C	-	-	-	Y
-80°C	-	-	-	Y

➤ Detergent resistance

	0.1%	1.0%
CHAPS	Y	-
TritonX	Y	-
Tween20	Y	-
SDS	-	Y

【 ProteoSave™ Publication List 】

<http://www.s-bio.com/products/low-protein-adsorption-products-elisa/proteosave/>

Cat. No	Product	Material	Note	Qty/Pk	Qty/Cs
MS-4205MZ	0.5mL Microtube	Polypropylene	Non-sterilized	100	500
MS-4255MZ	0.5mL Microtube	Polypropylene	Radiation sterilized	100	500
MS-4215MZ	1.5mL Microtube	Polypropylene	Non-sterilized	100	500
MS-4265MZ	1.5mL Microtube	Polypropylene	Radiation sterilized	100	500
MS-4201MZ	0.5mL Slimtube	Polypropylene	Non-sterilized	50	500
MS-4202MZ	1.5mL Slimtube	Polypropylene	Non-sterilized	50	500
MS-8296FZ	96-wells, Flat Plate	Polystyrene	No Lid, Non-sterilized	5	50
MS-8296DZ	96-wells, U Plate 1mL Deep well	Polypropylene	No Lid, Non-sterilized	5	20
MS-8296KZ	96-wells, flat Plate (black)	Polystyrene	No Lid, Non-sterilized	5	50
MS-3296UZ	96-wells, U Plate	Polystyrene	No Lid, Non-sterilized	5	50
MS-52150Z	15mL Conicaltube*	Body: PET, Cap:Polyethylene	Non-sterilized	5	100
MS-52550Z	50mL Conicaltube*	Body: Polypropylene, Cap:Polyethylene	Radiation sterilized	5	100

Remarks

Storage: Room temperature

Expiration: 2 years after production

*: Operational temperature -80°C to 40°C

