PEGylation <u>silane</u> reagents (for surface modification)

Products Description

Silane (Si) functionalized PEG can be used to modify glass, silica, silicone and other surfaces via the reaction between hydroxyl groups and triethoxyl silane. They can thus graft these support with functional groups that will confer specific physico-chemical properties (such as with nPEG-Silane, or electronic charges of amine, COOH), or binding properties (e.g. with Biotin groups), or allow further chemical modifications by chemistry (e.g. with amine, COOH) or direct reaction in aqueous samples (such as with SH, Maleimide, succinimidyl (NHS)).

PolyEthylene Glycol (**PEG**, also known as **PEO**: PolyEthylOxy) is a convenient structure used to create à link biomolecules and supports. It is available in a variety of lengths, providing a flexible spacer, and it is highly hydrophilic. PEG have found great application to create drug delivery systems, hydrophilic gels, special c oated surfaces, biocaptors, microscopy slides, microarrays, beads, vaccines, coatings, biomaterial s or biocompatible materials such as optical lenses, purification supports,...

Product name		Cat.number		
c	at.number	<u>Qty</u> : 100mg	(g·mol⁻¹)	
mPEG-silane	(M,L)			
	PG1-SL-1K	OO7020	1 000	
PEG6-0102	PG1-SL-2K	EV4980	2 000	$(CH_3O - (CH_2CH_2O)_n)$
PEG6-0101	PG1-SL-5K	DY8030	5 000	0 `
PEG6-0103	PG1-SL-10K	GV7350	10 000	
PEG6-350	PG1-SL-350	GV7360	350	IO5230
PEG6-550	PG1-SL-550	GV7370	550	
PEG6-750	PG1-SL-750	GV7380	750	
Silane-PEG-amine (NH2) (M)				CH ₃ CH ₂ O O
PEG6-0013	PG2-AMSL-2K	WT9700	2 000	CH3CH2O-SI-CH2CH2NHCNH-CH2CH2-(OCH2CH2)n-NH2
PEG6-0011	PG2-AMSL-3K	DZ5160	3 400	
PEG6-0012	PG2-AMSL-5K	DZ5380	5 000	CH ₃ CH ₂ O
PEG6-0010	PG2-AMSL-10K	DZ5390	10 000	
Silane-PEG-Maleimide (M)				CH ₃ CH ₂ O
PEG6-0033	PG2-MLSL-2K	GV7310	2 000	CH ₃ CH ₂ O-Si-CH ₂ CH ₂ NHCNH-PEG-OCH ₂ CH ₂ N
PEG6-0032	PG2-MLSL-3K	WT9720	3 400	CH ₃ CH ₂ O
PEG6-0031	PG2-MLSL-5K	FO9490	5 000	CH ₃ CH ₂ O
	PG2-MLSL-10K	LO4660	10 000	
Silane-PEG-NHS (M)				CH ₃ CH ₂ O 0
PEG6-0043	PG2-NSSL-2K	GV7260	2 000	CH ₃ CH ₂ O O O O O O O O O O O O O O O O O O O
PEG6-0042	PG2-NSSL-3K	WT9730	3 400	
PEG6-0041	PG2-NSSL-5K	GV7250	5 000	CH3CH2O
PEG6-0044	PG2-NSSL-10K	LO8210	10 000	
Silane-PEG-COOH (M)				CH₃CH₂O O
PEG6-0053	PG2-CASL-5K	GV7320	2 000	CH3CH2O-Si-CH2CH2NHCNH-CH2CH2-(OCH2CH2)n-COOH
PEG6-0052	PG2-CASL-3K	WT9740	3 400	
PEG6-0051	PG2-CASL-5k	GV7330	5 000	CH₃CH₂Ô
PEG6-0054	PG2-CASL-10k	LO5310	10 000	
Silane-PEG-S	\ /			
PEG6-0062	PG2-SLTH-3K	WT9750	3 400	

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FT-LO5310

Silane-PEG-biotin (M)				0
PEG6-0023 PEG6-0022 PEG6-0021	PG2-BNSL-1K PG2-BNSL-2K PG2-BNSL-3K PG2-BNSL-5K PG2-BNSL-10K	IV2270 GV7270 WT9710 GV7280 LO5320	0 2 000 0 3 400 0 5 000 CH ₃ CH ₂ O O CH ₃ CH ₂ OH ₂ CH ₂ C	CH ₃ CH ₂ O-Si-CH ₂ CH ₂ NHCNH-PEG-NHCOCH ₂ CH ₂ CH ₂ CH ₂
DSPE-PEG-Silane) PG2-DSSL-5K		1J9920	10 000 5 000	

• Physical Properties:

Appearance: Off white solid or viscous liquid depends on molecule weight;

Solubility: Soluble in regular aqueous solution (H₂O) as well as most organic solvents (DMSO).

• Storage Conditions:

Store: -20°C, desiccated. Silane PEG tends to hydrolyze from moisture. Avoid frequent thaw and frozen. (M)

• Reaction Procedures:

Generally, silane PEG is first dissolved in a mixture of ethanol/water solution, then allow the solution to contact with oxidized glass or silica surface for 30 min to 2 hours. Under this condition, silane PEG should bind to the material covalently.

• Materials Required:

Pegylation solution: Ethanol/water (w/w, 95%/5%);

Silane PEG stock solution, 10~50 mg/mL in pegylation solution, prepare in fresh.

Washing solution: Distilled water.

• Reaction Steps:

- 1. Dissolve targeted materials in Pegylation buffer.
- 2. Add silane PEG stock solution to the targeted conjugation materials with the final concentration keep at least 10 mg/mL. 10~50 molar excess of silane PEG needed for optimal conjugation;
- 3. Allow mixture agitates at room temperature for 30 min at room temperature or 2 hours at 4 -20 OC.
- 4. Wash out unreacted materials either by distilled water.

Related / associated products and documents

See BioSciences Innovations catalogue and e-search tool.

Other PEO/PEG reagents, including purified PEGs, synthetic PEG products (PEO3 to PEO36):

Heterobifunctional crosslinkers: NHS-PEO-MAL (AL6581) (altern.to SMCC 17412A)

• Homobifunctional crosslinkers: <u>NHS-PEO-NHS (BH8811)</u> (altern.to DSS 54940A)

MAL-PEO-MAL (L7736A) (altern.to BMOE L7730A)

• PEO Linkers & modifiers: Malemide-PEG-COOH (AZ4170) (altern.to BMPA 43064A)

NHS-PEG-COOH (AN1280) Maleimide-PEG-Amine (FK3520) Azide-PEG-COOH (WU0930))

■ PEG modifiers: mPEG-NHS and others mono-functionnal (MAL) (-SH, -OH,...)

Ordering information

Catalog size quantities and prices may be found at http://www.interchim.com.

For any information, please ask: Uptima / Interchim; Hotline: +33(0)470037306

Disclaimer: Materials from Uptima are sold **for research use only**, and are not intended for food, drug, household, or cosmetic use. Uptima is not liable for any damage resulting from handling or contact with this product.

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