FT- AYPMB0

Monofunctional Pegylation agents

(mPEG-X – MethylOxyPEG-X, Methoxy-PEG-X)

Presentation:

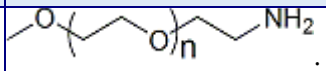
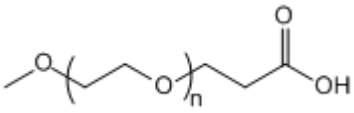
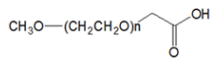
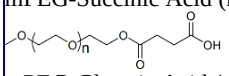
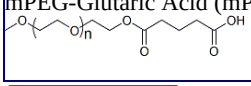
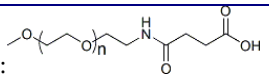
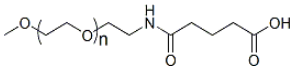
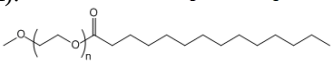
These Monofunctional PEG derivatives can be used to modify peptides and proteins and other materials, to create conjugates or modify surfaces. These Pegylation agents are available with a variety chemical reactivities (one or 2 per molecule) and with lengths of the PEG hydrophilic spacer ranging from 350Da to 40 000Da (40KDa).

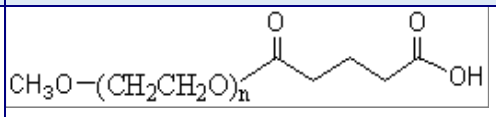
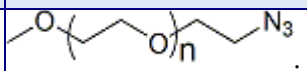
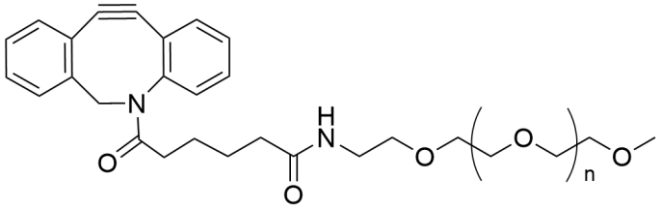
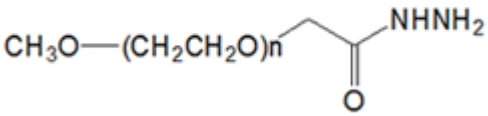
• Compared with other spacers, PEG structure increases water-solubility and stability. It also can reduce immunogenicity of conjugates and suppress the non-specific binding of charged molecules to the modified surfaces.

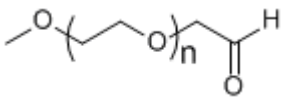
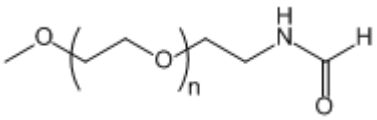
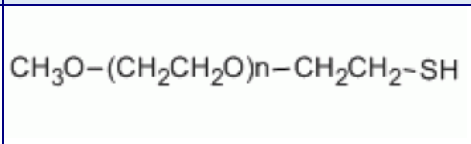
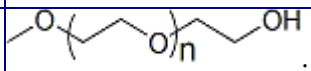
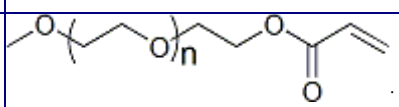
• mPEG agents have a PEG terminus blocked with a methoxy group (or methyloxy).

• The functional groups can react on specific chemical groups to create a covalent bond between the PEG spacer and the target compound, by conventional chemistry.

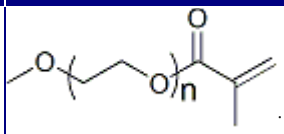
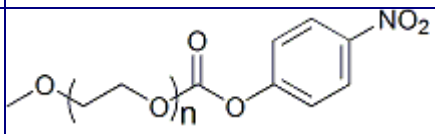
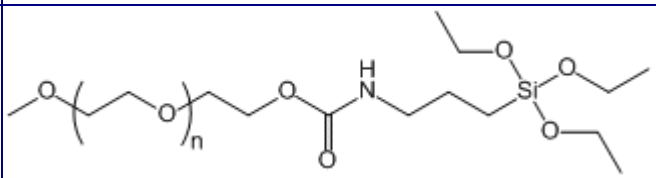
See information about functional groups and their reactivity

Product name synonymes	Cat.number Qty 0-250mg, 1-1g	**MW** (g/mol^{-1})	Structure
• AMINE			
mPEG – Amine Methoxy-PEG-Amine, PEG- NH_2 PG1-AM (L/M) [B] [N] Soluble in regular aqueous solution as well as most organic solvents.	B36BR1 B36BU1 B36BV1 WT9821 WT9811 B36BT1 WT9801 WT9831 WT9841 WT9851 JQ5081	350 550 750 1 000 2 000 3 400 5 000 10 000 20 000 30 000 40 000	 See sets of 3 or 6 MW #AWK8Q- See HCl salt #(2K) [B] +[D/N]
mPEG – AminoOxy Methoxy-PEG-AO PG1-AO (L/M)	AWK7U0 B33UJ1 B33UM1	550 5 000 30 000	See also mPEO$_n$-AminoOxy (FT-AWK7U0)
			See also HomoBifunctional Amine-PEG$_x$-Amine (FT-WU0101)
• CARBOXYL			
mPEG – COOH Methoxy-PEG-COOH, PEG-Proprionic acid, PEG-$(CH_2)_2$-COOH PG1-CA (L) [B] [N] Soluble in regular aqueous solution as well as most organic solvents.	B36C21 B36C31 B36C41 WT9881 WT9871 JO4951 WT9861 WT9891 WT9901 WT9911 B36C51	350 550 750 1 000 2 000 3 400 5 000 10 000 20 000 30 000 40 000	 See also **mPEO$_n$-Carboxyl** # +
Ask also for: mPEG-Acetic Acid (mPEG-AA):  mPEG-Succinic Acid (mPEG-SA):  mPEG-Glutaric Acid (mPEG-GA): 			mPEG-Succinamide Acid (mPEG-SAA):  mPEG-Glutaramide Acid (mPEG-GAA):  mPEG-Myristic acid (mPEG-MTA):  See HomoBifunctional Carboxyl-PEG$_x$-Carboxyl (FT-WU0101)

Product name synonymes	Cat.number Qty 0-250mg, 1-1g	**MW** (g/mol^{-1})	Structure
• NHS (Succinimide Ester)			
mPEGx-NHSuccinumide Ester mPEG-SCM, PG1-NS (M)	DZ3511 DZ3521 DZ3531 DZ3541 DZ3551 DZ3561 HQ3581	1 000 2 000 5 000 10 000 20 000 30 000 40 000	 See also **mPEO$_n$-NHSuccinimide** #RPX58G(PEG16) #8X543/C (mPEG$_5$-t-Butyl ester) #B4K6L (mPEG$_3$-S-PEG1-tButyl ester) #IO508/N (mPEG-Succinimidyl Glutarate Est MW 1000Da)
• MALEIMIDE			
mPEGx-Maleimide mPEG-MAL, PG1-ML(M)	DZ5781 DZ5761 DZ5781 DZ579 DZ5801 GV7341	1 000 2 000 10 000 20 000 30 000 40 000	See also **mPEO$_n$-Maleimide** #A1LYG2 (PEG$_4$), RJ2021(PEG$_{24}$),
• AZIDE			
mPEG – Azide Methoxy-PEG-Azide, PEG-Azide, mPEG-AZ, PG1-AZ (M) [B][N] Soluble in regular aqueous solution as well as most organic solvents.	AWJLI1 Inquire Inquire WU0001 WT9991 WT9981 WT9971 WU0011 WU0021 WU0031 B3AB21	350 550 750 1 000 2 000 3 400 5 000 10 000 20 000 30 000 40 000	 See also **mPEO$_n$-Azide** #6W540 + [D/N]
mPEG-DBCO (K,M) PG1-DB C Appearance : White crystalline (for 10K) Soluble in Water, DMSO, DMF, chloroform BMF001048N *1-100mg 2-1g	B4YBD- B4YBB- B36C81 1Q7031 IOT811 IOT821 IOT831 IOT841	350 550 1 000 2 000 5 000 10 000 20 000 30 000	 See FT-B36C81 with other PEG DBCO reagents.
			See HomoBifunctional Azide-PEG$_x$-Azide (FT-WU0101)
• HYDRAZIDE			
mPEG – Hydrazide Methoxy-PEG-**oxo**-hydrazide, mPEG-HZ, mPEG-HAZ PG1-HAZ (M) [B] Soluble in regular aqueous solution as well as most organic solvents.	Inquire AYPM71 AYPM81 AYPM91 AYPMA1 AYPMB1 AYPMC1 AYPMD1 AYPME1 AYPMF1	350 to 750Da 1 000 2 000 3 400 4 000 5 000 10 000 20 000 30 000 40 000	 See also **mPEO$_n$-Hydrazide** #AYQU01(PEO$_2$) to AYQUB0(PEO$_{36}$ + [D/N]
			See HomoBifunctional Hydrazide-PEG$_x$-Hydrazide FT-WU0101
• ALDEHYDE			

Product name synonymes	Cat.number Qty 0-250mg, 1-1g	**MW** (g/mol-1)	Structure
mPEG – Aldehyde Methoxy-PEG-Aldehyde, mPEG-CHO, mPEG-CH_2-CHO PG1-AL (M) [B] Soluble in regular aqueous solution as well as most organic solvents.	AWK7G- WT8931 WT8921 WT8911 WT8941 WT8951 WT8961 KV8511	350 to 750Da 1 000 2 000 5 000 10 000 20 000 30 000 40 000	B36BL0(350) ; B36BM0(550) ; B36BN0(750)  +[DN] Ask also proprionaldehyde (ALP) MW:350-30000Da (FT-BS4GX1) and butyraldehyde (ALB), but also[] amide-propionaldehyde, urethane-propionaldehyde, amide-butyraldehyde, urethane-butyraldehyde (see NT-PEGYLs). E.g. mPEG PropionAldehydes See also $mPEO_n$-PropionAldehydes (FT-0B6601)
mPEG – Amide-Acetaldehyde Methoxy-PEG-NH-CHO, PEG-AAD PG1-ALA (M) [B] [N] Soluble in regular aqueous solution as well as most organic solvents.	AWK7T- AYR1K1 AYR1L1 AYR1M1 AYR1N1 B36BO- B36BP-	350 to 1KDa 2 000 5 000 10 000 20 000 30 000 40 000	 []
mPEG-Propionaldehyde	Inquire		2K, 5K, 10K, 20K(1R3030)
			See HomoBifunctional Aldehyde-PEG_x-Aldehyde (FT-WU0101)
• MISCEANOUS			
mPEG – Thiol Methoxy-PEG-Thiol, PEG-SH PG1-SH (M) [C][B] MP : 60-64 °C Soluble in regular aqueous solution as well as most organic solvents. Size: 1-1g 2-5g 3-10g	AWKL91 B36E51 B36E61 B36E71 B36E81 B36E91 B36EA1 B36EB1 B36EC1 B36ED1 B36EE1	350 550 750 1 000 2 000 3 400 5 000 10 000 20 000 30 000 40 000	 +[D]
mPEG – Hydroxyl Methoxy-PEG-Hydroxyl, PEG-OH, methyloxy-PEG, Polyethylene Glycol Monomethyl Ether CAS : 25322-68-3 . PG1-OH (ZL) [C][B] [-] MP : 60-64 °C Soluble in regular aqueous solution as well as most organic solvents. Size: 1-10g 2-50g 3-100g	B36A91 B36AA1 B36AB1 B36AC1 AWK7M1 IO5011 IO5021 IO5031 IO5041 IO5051 IO5061 1B3471	160 350 550 750 1 000 2 000 3 400 5 000 10 000 20 000 30 000 40 000	 Appearance: Viscous liquid or white solid depends on MW. Moisture Content: <0.5%. MW: +-15% around its mean MW. See also hydrolyzed PEGs (PEG-OH, 10-26KDa)[B36US0] [Hydrolyzed Poly(VinylAlcool)] See also **$mPEO_n$-Hydroxyl** #BH9112(PEO_{11}) to A1LYO2(PEO_{48})
mPEG – Acrylate mPEG-ACR, mPEG-MAR CAS:26915-72-0 PG1-ACR (ML) [B] Soluble in regular aqueous solution as well as most organic solvents.	B36BA1 B36BF1 B36BH1 B36BB1 B36BD1 B36BG1 B36BA1 B36BC1 CV8251	350 Da 550 Da 750 Da 1 000 2 000 5 000 10 000 20 000 30 000	 +[N]

FT- AYPMB0

Product name synonymes	Cat.number Qty 0-250mg, 1-1g	**MW** (g/mol^{-1})	Structure
mPEG – MethAcrylate mPEG-MA, mPEG-MAR CAS:26915-72-0 PG1-MAR (ML) [B][N] Soluble in regular aqueous solution as well as most organic solvents.	B36D91 B36DA1 B36DC1 B36D61 B36D81 B36DB1 B36D51 B36D71 AWK7B1	350 Da 550 Da 800 Da 1 000 2 000 5 000 10 000 20 000 40 000	
mPEG – NPC mPEG-Nitrophenyl Carbonate PG1-MPC (ML) [B][N] OH and Amine reactive Soluble in regular aqueous solution as well as most organic solvents.	Inquire WT9101 DY6621 WT9091 DY6631 WT9111 WT9121 HV4931	350 to 800Da 1 000 2 000 5 000 10 000 20 000 30 000 40 000	
mPEG-silane PG1-SL(L,M)	GV7362 GV7372 GV7382 OO7022 EV4982 WT9712 DY8032 GV7352 AWKI52 B2ZUM2 B2ZUN2	350 550 750 1 000 2 000 3 400 5 000 10 000 20 000 30 000 40 000	 Other PEG Silanes : see FT-LO5310 See also PEO_6-Silane #B63UT

Store at -20°C (M). Keep desiccated. Protect from light. Stable for +12months at -20°C.

Physical Properties:

- Soluble in regular aqueous solution as well as most organic solvents: water, ethanol, chloroform, DMSO, etc

Handling and Use:

For best use, material should always be kept in low temperature in dry conditions and under inert gaz for best stability. Prepare fresh solution right before use. Avoid frequent thaw and freezing.

Functional groups information (reactivity): See more information [NT-XLreact]

The **amino** group (-NH2) reacts readily with succinimidyl ester groups (in particular NHS), carboxylic groups (via carbodiimide mediation) and many other amine reactive functional groups either in aqueous buffer or organic solvents.

The **carboxyl** group (-COHH) can be conjugated using severa conventional chemistries: via carbodiimide mediation to amines, with and many other amine reactive functional groups either in aqueous buffer or organic solvents.

The **N-hydroxysuccinimydyl** group **(NHS)** reacts at pH 7.5-9 in aqueous phase on aliphatic primary (– NH2) and secondary amines (=NH) (in fact on its deprotonated form), optimally at neutral pH or higher. A peptidic bond (amide link -CO-NH-) is formed.

NitroPhenyl Carbonate group (**NPC)** can react with both amine and hydroxyl groups.
The **Maleimide** group reacts with thiols readily at pH 6.5~7.5 to form stable thioether bonds.

Hydrazine and **hydroxylamine** derivatives also have amine-like reactivity and, in some cases, can be coupled to water-soluble carbodiimide – activated carboxylic acid groups

The **Hydrazide** group give a variety of reactions: they react with Carbonyls (aldehydes and ketones) much faster than amine does, making them useful for site-specific crosslinking.
Reaction with carboxyls better occur with activation by a carbodiimide.
Reactions with amines are nonetheless useful, but require mediators (NH_4BO_4, via Shiff'base formation)

The **Aldehyde** group react with hydrazides and amines at pH 5-7. The reaction with hydrazides is faster than with amines, making them useful for site-specific crosslinking. It aso react react spontaneously with amino groups to form Schiff base intermediates that can be stabilized by reduction with Sodium cyanoborohydride ($NaCNB_3$).

Related / associated products and documents

See or ask for Heterobifunctional PEG and PEO reagents; 3/4/5/6Arm-PEG reagents

See BioSciences Innovations catalogue and e-search tool.

For any information, please ask : Uptima / Interchim; Hotline : +33(0)4 70 03 73 06