

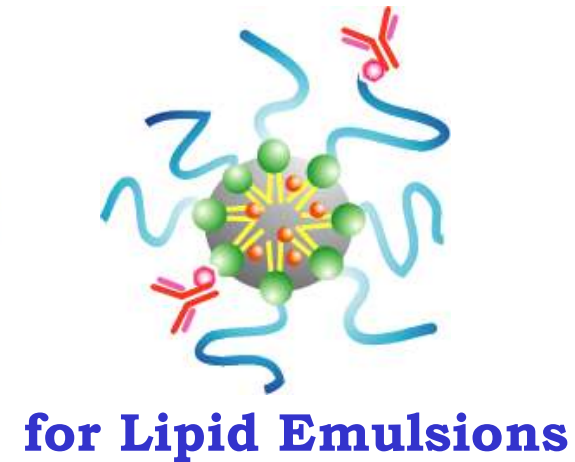
Functionalized Phospholipid derivatives

Activated phospholipids easily react with peptides and antibodies under moderate conditions. Therefore they are effective not only to modify the surface of Liposomes and lipid emulsion, but also to make drugs hydrophobic.

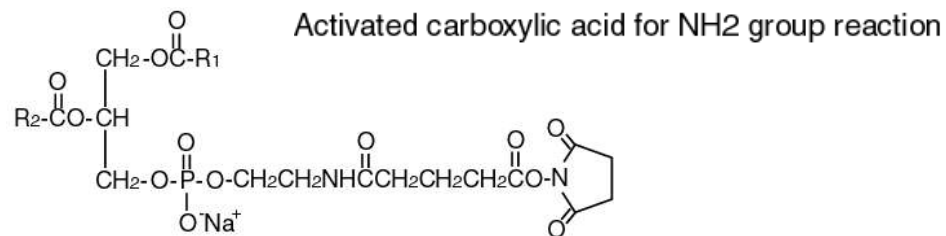
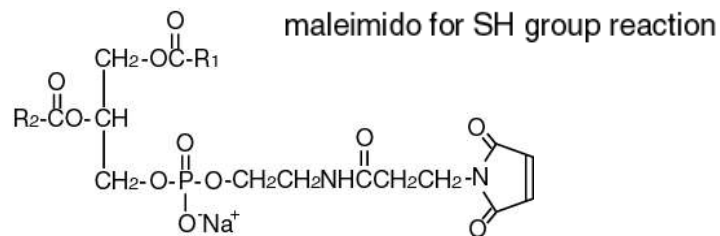
Available reactive phospholipids are:

- 1) Maleimido phospholipids to modify SH groups
- 2) Activated carboxylic phospholipids to modify NH₂ groups

We also have activated PEG phospholipids with a PEG chain introduced between the activated group and the phospholipid framework as shown in the figure.

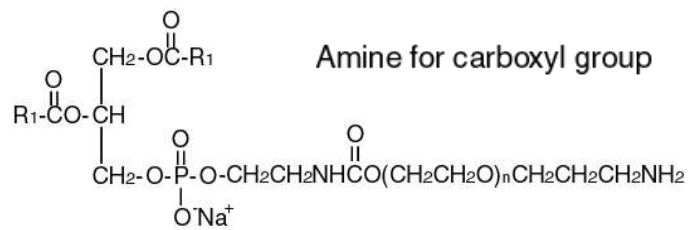


Activated Phospholipid derivatives



Name	ID	Target Group	R1COO	R2COO
COATSOME ^(R) FE-6060MA3	DPPE-MAL	SH Group	C16:0	C16:0
COATSOME ^(R) FE-8080MA3	DSPE-MAL		C18:0	C18:0
COATSOME ^(R) FE-6081MA3	POPE-MAL		C16:0	C18:1
COATSOME ^(R) FE-8080SU5	DSPE-NHS	NH2 Group	C18:0	C18:0
COATSOME ^(R) FE-6081SU5	POPE-NHS		C16:0	C18:1

Activated PEG Phospholipid derivatives



Name	ID	Target Group	R1COO	PEG chain Mw
SUNBRIGHT ^(R) DSPE-020PA	DSPE-PEG-NH2	COOH group	C18:0	2,000
SUNBRIGHT ^(R) DSPE-050PA				5,000
SUNBRIGHT ^(R) DSPE-020MA	DSPE-PEG-MAL	SH group		2,000
SUNBRIGHT ^(R) DSPE-050MA				5,000

Phospholipids derivatives of NOF CORPORATION

NOF provides highly pure phospholipid derivatives (COATSOME[®] Series) appropriate for lipid emulsion and LIPOSOME formulations, such as pharmaceuticals and cosmetics.

Various kinds of phospholipids for pharmaceuticals and cosmetics of various grades are available from NOF.

