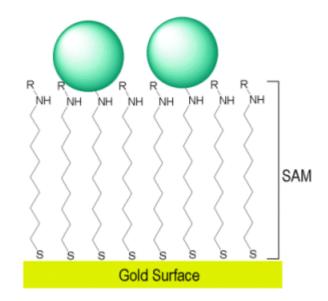
## SAM : Self-Assembled Monolayers reagents

SAM reagents assembly spontaneously in uniform uni-directional and stable layers on a solid surface. Formed Self-Assembled Monolayers (SAMs) are crystalline chemisorbed organic single layers formed on a solid substrate, typically thiol compounds and gold that are well-established to preparare biosensors surfaces.

## Research applications:

- transfer mechanisms of proteins molecular layers
- biosensors, microarrays and other detection systems
- surface plasmon resonance (SPR)
- quartz crystal microbalance (QCM)
- adhesive interactions and friction imaging ("microscopy Chemical Force Microscopy")
- electrochemical captors, optical industry



## More technical information and applications

SAM reagents are available with various functional groups and chain lengths.

**Aminoalkanethiols** are utilized for the modification of a gold surface to introduce amino groups on it. The amino group is usually modified with amine-reactive materials, such as protein molecules or biomaterials, to functionalize the gold surface. The modification of a gold substrate with SAMs of **N-Fmoc aminoalkanethiols** may be utilized to avoid amino group - gold surface interactions and to develop the sensor-chip highly regulated by photopatterning.

**Carboxyalkanethiols** are utilized for the modification of a gold surface to introduce carboxylic groups on it. The carboxylic group is often converted to activated N-hydroxysuccinimide ester, to conjugated to amines of biomaterials.

**Carboxyalkyldisulfides** are oxidized compounds of carboxyalkanethiols and are reported to form similar SAMs, but less stinking and more stable than thiols.

**Succinimidyl ester-**terminated alkyldisulfides are amine-reactive analogs of carboxyalkyldisulfide, for direct conjugation of i.e. protein, peptides and aminated nucleic acids.

**Ferrocenylalkanethiols** are utilized for the modification of gold surface to introduce electrochemically active molecules on it. The modified gold surface can be utilized for the development of sensitive electrochemical analyses.

**Hydroxyalkanethiols** are utilized as "dilution reagents" or "blocking reagents" on a gold surface to control the density of reactive groups on the surface or to prevent non-specific binding of analytes on the surface.

NTA-attached SAMs allow to prepare affinity support for poly-Histidine-tagged proteins.

A423	11-Amino-1-undecanethiol, hydrochloride	C406	5-Carboxypentyl disulfide
A424	8-Amino-1-octanethiol, hydrochloride	D524	4,4'-Dithiodibutyric acid
A425	6-Amino-1-hexanethiol, hydrochloride	D537	Dithiobis(succinimidyl undecanate)
F287	N-Fmoc-Aminoundecanethiol	D538	Dithiobis(succinimidyl octanate)
F288	N-Fmoc-Aminooctanethiol	D539	Dithiobis(succinimidyl hexanate)
F289	N-Fmoc-Aminohexanethiol	F246	11-Ferrocenyl-1-undecanethiol
C385	10-Carboxy-1-decanethiol	F247	8-Ferrocenyl-1-octanethiol
C386	7-Carboxy-1-heptanethiol	F269	6-Ferrocenyl-1-hexanethiol
C387	5-Carboxy-1-pentanethiol	H337	11-Hydroxy-1-undecanethiol
C404	10-Carboxydecyl disulfide	H338	8-Hydroxy-1-octanethiol
C405	7-Carboxyheptyl disulfide	H339	6-Hydroxy-1-hexanethiol

## Related products/documents

Products HighLights Overview, including:

Crosslinking tools – PEO/PEG biotinylation agents and AmineControlled conjugation kit

FluoProbes labeling agents

<u>Dialysis and Desalting tools</u> – CelluSep tubings, SpectraPor tubings, GebaFlex, FloatALyser, SlideALyser,...

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