Europa Bioproducts Ltd

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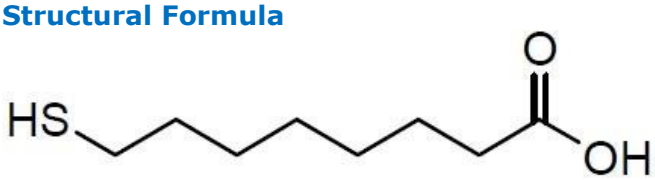
7-Carboxy-1-heptanethiol

Item#	Unit Size
C386-10	10 mg
C386-12	100 mg

Chemical Name: 7-Carboxy-1-hepanethiol
CAS: 74328-61-3
Appearance: Colorless or slightly yellow liquid
Purity: ≥97.0% (HPLC)
MW: 176.28, $C_8H_{16}O_2S$
Application: SAM preparation, carboxylate coating

Storage Condition: 0-5ºC, protect from metal
Shipping Condition: ambient temperature

Product Description

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, which reacts with an amine group of biomaterials. Dojindo's newly developed 15-Carboxy-1-pentadecanethiol has a 15-carbon chain, which is the longest alkanethiol available in the market among carboxyalkanethiols. Five different carboxyalkanethiols including Carboxy-EG6-undecanethiol are available for gold surface modification. Malone and others fabricated a highly sensitive SPR sensor using 15-Carboxy-1-pentadecanethiol. Glenn and coworkers used carboxyalkanethiol and poly-L-lysine to create an immobilized cytochrome b5 multilayer electrode. Mizutani and others fabricated immobilized glucose oxidase multilayer electrodes in a similar manner. Both groups reported electron transfer from biomaterials to a gold surface. These kinds of multilayer film electrodes are well suited for studies of diffusion electron transfer. Frisbie and others developed a new method, chemical force microscopy, for obtaining the adhesive interactions and the friction image of patterned sample surfaces. They used atomic force microscopy (AFM) to measure the interactions and spatial mapping of chemically distinct functional groups. Frisbie and others formed carboxyalkanethiol monolayers on the gold surfaces of AFM cantilever tips. They used AFM to measure the adhesive and friction forces between molecularly modified probe tips and organic monolayers terminating in a lithographically defined pattern of distinct functional groups.

Structural Formula