

PROTOCHIPS Au-FLAT™ FREQUENTLY ASKED QUESTIONS

WHAT IS Au-FLAT?

Au-Flat is an ultrastable Cryo-EM sample support with a 45nm holey Gold alloy film (80% Au / 20% Pd) on 3 mm gold mesh grids. Au-Flat is a derivative of our patented C-Flat product.

WHAT VARIETIES OF Au-FLAT ARE AVAILABLE?

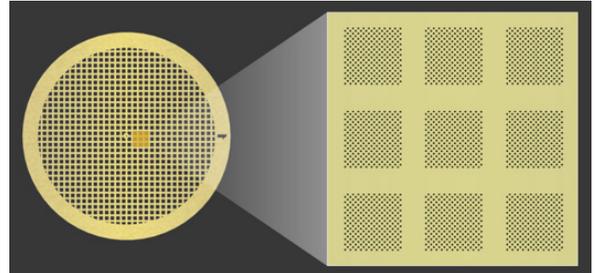
Au-Flat is offered in two configurations:

1.2 μm /1.3 μm hole pattern on 300 mesh Gold grids

- Box of 50: [GF-1.2/1.3-3Au-45nm-50](#)
- Box of 5: [GF-1.2/1.3-3Au-45nm-5](#)

2 μm /2 μm Hole Pattern on 200 mesh Gold grids

- Box of 50: [GF-2/2-2Au-45nm-50](#)



WHAT ARE THE BENEFITS OF Au-FLAT OVER HOLEY CARBON SUPPORTS LIKE C-FLAT?

Better reconstructions with less data

Au-Flat significantly reduces beam-induced motion during imaging compared to carbon films, improving image quality and resolution.

Biocompatible

Au-Flat features a holey Au/Pd film on a gold mesh grid, so it's chemically inert and biologically compatible.

Durable

Au-Flat's film is significantly stronger than carbon films and is more capable of surviving the Cryo-EM workflow including tweezer handling, glow discharge, blotting, auto-grid loading and plunge freezing.

WHAT ARE THE BENEFITS OF Au-FLAT OVER OTHER GOLD FOIL TEM GRIDS?

Fewer Mistakes

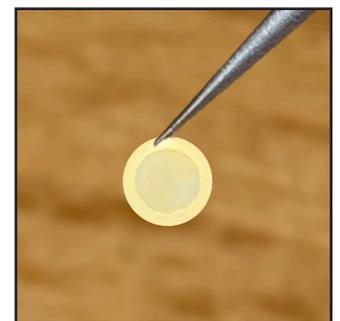
The lighter color of the Au/Pd alloy film compared to the underlying gold mesh grid makes it easy to identify the "holey" side of the grid during sample prep. This ensures the sample is deposited on the correct side and that the grid is loaded and imaged in the correct orientation.

Stronger

Au-Flat is produced with gold mesh grids that are about 6 microns thicker than typical Cryo-EM grids. This makes the grids stiffer and less likely to bend or deform. The increased thickness is fully compatible with side-entry holders as well as auto-loaders.



Au/Pd Foil Side



Gold Mesh Side

HOW LONG DOES IT TAKE TO RECEIVE Au-FLAT?

Just like C-Flat, Au-Flat is readily available direct from Protochips and our worldwide distributors in less than 4 weeks.

HAS Au-FLAT BEEN VALIDATED BY EXPERTS?

Yes! Protochips has conducted pilot trials to test and validate the benefits of the Au-Flat. These trials were conducted by researchers at **New York Structural Biology Center, Caltech, CUNY, and Duke University**. Feedback from our field trial users:

"They're quite fantastic!"

"Great drift results!"

"...almost all the pictures we took were reaching between 2.9 and 3.1Å resolution based on CTF than rings. This is amazingly consistent, probably much more than with any other dataset I've collected."

"... shows reduced overall motion and max in-frame motion."

"They perform comparably to (other gold-foil TEM grids)"

"It is much easier to see the holey film side of the Au-Flat grid. This is significant, because it is very difficult with (other gold foil TEM grids), where the sides look identical."

"No difference (compared to other Cryo-grids) when preparing the grids."

"Ice thickness uniformity is similar to other grids."

"Particles are uniformly distributed across the grid."

"The grids feels sturdier."