Molecular Dimensions ACHIEVE MORE.

Protochips Quantifiably Better™

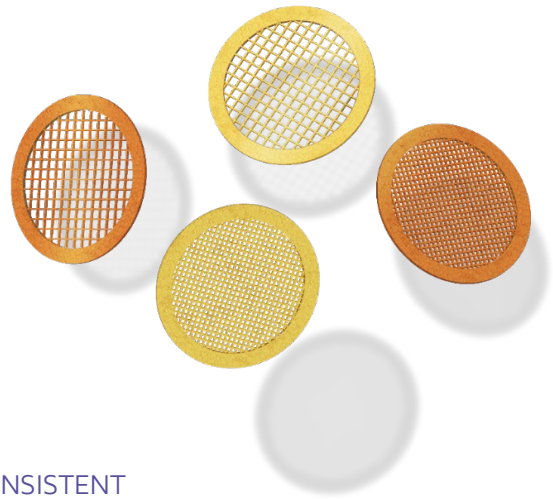
C-FLAT Carbon Grids

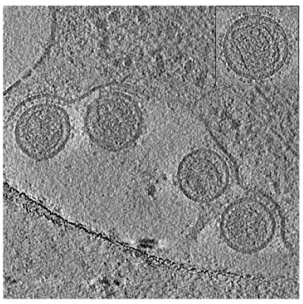
Holey Carbon Grids optimized for Cryo-EM

Acquire better images:

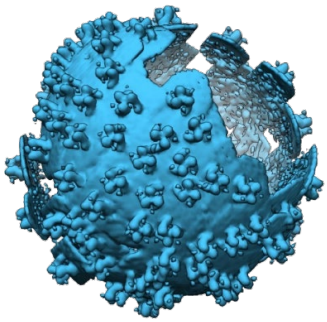
- Control your ice with two carbon thicknesses:
  - 20 nm for the thinnest ice on the market*.
  - 40 nm for samples needing more robust support. *
- Delivered ready to use with no cleaning required.
- Better image resolution with more uniform, thinner ice (Cho *et al*, 2013).
- High quality grids delivered in 2 weeks or less due to new productions and QC capabilities.

*Ice both at centre of hole and across entire hole thinner than for leading competitors, in addition ice thickness variation is smaller than for leading competitors, as independently measured by Cho *et al*, *Journal of Analytical Science and Technology* **4**: 7, 2013.





Clear, high contrast images of whole cells, particles, macromolecules and much more.



Allowing you to create high quality 3D reconstructions with ease (This image courtesy of Christine Reidel)

CONSISTENT

Researchers around the world have reported that the ultra-flat surface of C-flat leads to even ice thickness and uniform particle distribution, allowing for superior 3D reconstructions All C-flat holey carbon grids undergo rigorous quality control standards before being shipped, ensuring the maximum number of usable squares for imaging and 3-D reconstructions.

COMPATIBLE

From large cells to individual molecules C-flat offers carbon thickness ranging from 20 nm to 40 nm to support any biological sample. C-flat also comes in hole sizes ranging from 1-4 µm, mesh sizes from 200-400 and is available in copper or gold, allowing for a wide variety of options compatible with any sample preparation procedure.

CLEAN

C-flat is delivered ready-to-use right out of the box because it uses no plastics or polymers in its production. As a result, C-flat requires no solvent washing steps prior to use, leading to less breakage of the holey carbon film and faster sample throughput in Cryo-EM facilities.

CONFIDENCE

A few recent structures solved using cryo-data collected with Protochip C-Flats:

Du, M. *et al. Nature* **562**: 444-447 (2018).
Liu, Y. *et al. Proc. Nat. Acad. Sci.* **115**: 3362-3367 (2018).
Yu, H. *et al. Cell* **173**: 1636-1649 (2018).
Schubert, E. *et al. eLIFE* **7**: e38017 (2018).

Available to ship immediately

lubio science

Your distributor in Switzerland

LubioScience GmbH
Baumackerstrasse 24
8050 Zürich
Phone 041 417 02 80
Fax 041 417 02 89
info@lubio.ch
www.lubio.ch

A: Molecular Dimensions Limited
The Innovation Centre,
217 Portobello,
Sheffield, S1 4DP, UK
T: +44 (0)117 224 2257
W: moleculardimensions.com
E: enquiries@moleculardimensions.com
O: orders@moleculardimensions.com

A: Molecular Dimensions Inc
6201 Trust Drive
Holland, OH 43528
USA
T: +1 877479 4339
W: moleculardimensions.com
E: enquiries@moleculardimensions.com
O: usorders@moleculardimensions.com

Molecular Dimensions ACHIEVE MORE.

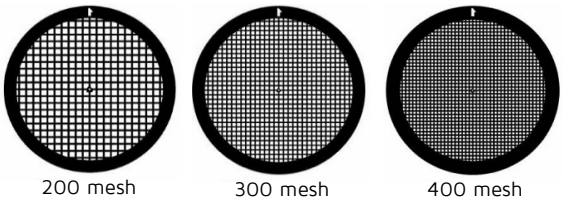
Take advantage of the whole Protochip range to get the ideal C-Flat grid for your experiment.

1. Choose the best grid for you

i) Gold or copper?

CU Copper	AU Gold
29 CU Copper	79 AU Gold

ii) Choose a fine grid for good support for single particle analysis or a wide mesh to avoid interference with the electron beam for great tomography data.



200 mesh | 300 mesh | 400 mesh

2. Choose your carbon support

i) Choose 20nm Carbon for the thinnest ice on the market or (for copper only) 40 nm for samples requiring more robust support.

ii) Choose the best hole and spacing for your sample:

Pattern code	Hole Size	Hole Spacing	Image
1.2/1.3	1.2 µm	1.3 µm	
2/1	2 µm	1 µm	
2/2	2 µm	2 µm	
2/4	2 µm	4 µm	
4/2	4 µm	2 µm	
MH	Varies*	Varies*	

* Multi-hole pattern contains circles from 1.0 to 2.0 µm and ellipses from 1.0 x 4.0 µm to 2.0 x 8.0 µm

Product Code (all packs contain 50 grids)	Grid		Carbon	
	Mesh	Material	Pattern code	Thickness
CF-1.2/1.3-2AU-50	200	Au	1.2/1/3	20
CF-1.2/1.3-3AU-50	300	Au	1.2/1/3	20
CF-1.2/1.3-4AU-50	400	Au	1.2/1/3	20
CF-1.2/1.3-2CU-50	200	Cu	1.2/1/3	20
CF-1.2/1.3-2CU-T-50	200	Cu	1.2/1/3	40
CF-1.2/1.3-3CU-50	300	Cu	1.2/1/3	20
CF-1.2/1.3-3CU-T-50	300	Cu	1.2/1/3	40
CF-1.2/1.3-4CU-50	400	Cu	1.2/1/3	20
CF-1.2/1.3-4CU-T-50	400	Cu	1.2/1/3	40
CF-2/1-2AU-50	200	Au	2/1	20
CF-2/1-3AU-50	300	Au	2/1	20
CF-2/1-4AU-50	400	Au	2/1	20
CF-2/1-2CU-50	200	Cu	2/1	20
CF-2/1-2CU-T-50	200	Cu	2/1	40
CF-2/1-3CU-50	300	Cu	2/1	20
CF-2/1-3CU-T-50	300	Cu	2/1	40
CF-2/1-4CU-50	400	Cu	2/1	20
CF-2/1-4CU-T-50	400	Cu	2/1	40
CF-2/2-2AU-50	200	Au	2/2	20
CF-2/2-3AU-50	300	Au	2/2	20
CF-2/2-4AU-50	400	Au	2/2	20
CF-2/2-2CU-50	200	Cu	2/2	20
CF-2/2-2CU-T-50	200	Cu	2/2	40
CF-2/2-3CU-50	300	Cu	2/2	20
CF-2/2-3CU-T-50	300	Cu	2/2	40
CF-2/2-4CU-50	400	Cu	2/2	20
CF-2/2-4CU-T-50	400	Cu	2/2	40
CF-2/4-2AU-50	200	Au	2/4	20
CF-2/4-3AU-50	300	Au	2/4	20
CF-2/4-4AU-50	400	Au	2/4	20
CF-2/4-2CU-50	200	Cu	2/4	20
CF-2/4-2CU-T-50	200	Cu	2/4	40
CF-2/4-3CU-50	300	Cu	2/4	20
CF-2/4-3CU-T-50	300	Cu	2/4	40
CF-2/4-4CU-50	400	Cu	2/4	20
CF-2/4-4CU-T-50	400	Cu	2/4	40
CF-4/2-2AU-50	200	Au	4/2	20
CF-4/2-3AU-50	300	Au	4/2	20
CF-4/2-4AU-50	400	Au	4/2	20
CF-4/2-2CU-50	200	Cu	4/2	20
CF-4/2-2CU-T-50	200	Cu	4/2	40
CF-4/2-3CU-50	300	Cu	4/2	20
CF-4/2-3CU-T-50	300	Cu	4/2	40
CF-4/2-4CU-50	400	Cu	4/2	20
CF-4/2-4CU-T-50	400	Cu	4/2	40
CF-MH-2AU-50	200	Au	MH	20
CF-MH-3AU-50	300	Au	MH	20
CF-MH-4AU-50	400	Au	MH	20
CF-MH-2CU-50	200	Cu	MH	20
CF-MH-2CU-T-50	200	Cu	MH	40
CF-MH-3CU-50	300	Cu	MH	20
CF-MH-3CU-T-50	300	Cu	MH	40
CF-MH-4CU-50	400	Cu	MH	20
CF-MH-4CU-T-50	400	Cu	MH	40

Also available: Grid-boxes and gridbox storage, Taylor-Wharton storage and shipping dewars, foam, stainless steel and aluminum transfer dewars, Anatrace detergents and protein production and expression consumables and reagents.