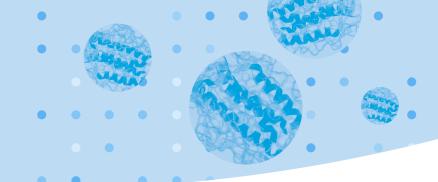
# nuclera



## Making proteins accessible

Obtaining suitable proteins is a bottleneck in the drug discovery workflow – no protein, no screen

#### **Explore eProtein Discovery**<sup>™</sup>

Nuclera empowers scientists to make progress on protein projects through a rapid protein prototyping system to automate construct screening, expression, characterization, and purification of proteins.

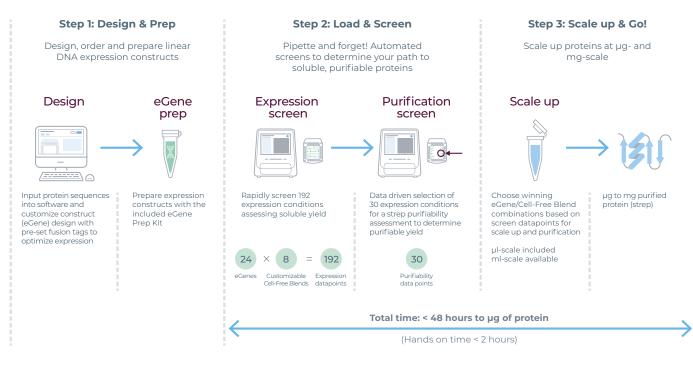
- Rapid protein prototyping enables progress by allowing scientists to gain awareness quickly about which proteins

   and which variations of a protein – will work
- Simultaneously screen multiple constructs and protein synthesis reagents for soluble expression, and then scale up to micrograms of recombinant protein off cartridge to test in your applications
- Explore multiple DNA constructs, including solubility tags, polymorphisms and isoforms on the same smart cartridge to expand your range of accessible proteins

Get soluble protein to discover the next hit in your drug discovery pipeline!



#### eProtein Discovery<sup>™</sup> Workflow



#### **Robust screening data: Soluble expression and purification**

Robust solubility screening and purifiable yield assessment provided, allowing for the selection of the best construct and Cell-Free Blend to obtain desired protein.

"

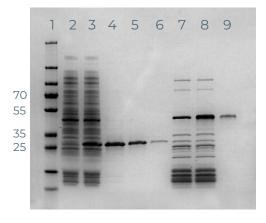
		nι	cler	a	
Construct		kDa	Cell-Free Blend	Expression (mg/mL)	Ŧ
Construct		kDa	Cell-Free Blend	Expression (mg/mL)	
Det_Strep_SUMO_Protein A	۰	67	4		0.80
Det_Strep_Protein A_SUMO	0	66	4		0.77
Det_Strep_Protein A_TRX		66	4		0.77
Det_Strep_TRX_Protein A		67	4		0.71
Det_Strep_Protein A		54	4		0.58
Det_Strep_SUMO_Protein B	0	66	2		0.58
Det_Protein B_Strep		66	3		0.57

What you're doing could change everything we do at the benchtop.

**Principal Scientist** Pharmaceuticals Division, Lead Discovery, Global Pharma Organization

**Figure 1. Characterization results.** At the end of screening, the predicted yields of each construct (units of mg/mL or µM) are provided for selection before moving to the purification step.

#### **Purified proteins**



Lane	Description			
1	Molecular weight ladder (kDa)			
2	Cell-Free Blend-1 background			
3	Cell-Free Blend-1 with GFP DNA construct			
4 - 6	GFP eProtein Discovery™ expressed and purified from Cell-Free Blend-1 - 1µl, 0.5µl, 0.25µl			
7	Cell-Free Blend-2 background			
8	Cell-Free Blend-2 SUMO-VEGF DNA construct			
9	SUMO-VEGF eProtein Discovery™ expressed and purified from Cell-Free Blend-2 - 1µl			

Figure 2. SDS-PAGE results. Illustration of purified protein produced from the eProtein Discovery<sup>TM</sup>.

#### Which proteins have been produced so far?



Figure 3. Proteins produced. Chaperones, Hydrolases, Ligase, Oxireductases, Signaling protein, Structural protein and Transferases with the molecular weight range: Min: 18kDa to Max: 300kDa (Avg: 46kDa).

### nuclera

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