

Built for throughput. With continuous flow from your laptop.

REALIA™ is MindWalk's high-throughput protein production and developability characterization service.

Your sequences, your materials and your data stay with us: one team, from construct to characterization.

High-throughput by design.

- Mammalian and E. coli expression
- Parallel purification
- Full developability panel on the same samples

Full service, one team.

- Sequence to purified protein
- Analytics and structured data delivery
- One team with antibody engineering experience

Secure.

- No offshore labs
- No overseas shipping
- Every step done in N. America
- Same-day delivery available

Data generation to validate and feed your models

Every sample leaves the laboratory as one structured record, built so wet-lab results can validate your designs and feed the next round of model training.

- **One record per sample:** construct, expression, purification, assay results, all traceable.
- **Model-ready deliverables:** formatted for direct use in your analysis pipeline.
- **Validation at scale:** hundreds of designed variants per cycle, with expression, developability and binding data.
- **Robust and consistent:** same workflow every cycle for consistency, robustness and reproducibility.
- **Platform-ready:** option to use MindWalk's platform – organized in ReefIQ™ and interrogated with LensAI™.

Reduced risk

Everything between your sequence file and the final dataset happens under one accountable team.

- **Intellectual property:** constructs and plasmids handled and stored locally. Nothing sent to an offshore lab.
- **Materials:** all reagents move by same-day courier. No international freight or long cold-chain legs.
- **Data:** results generated and held locally, simplifying data-governance and vendor-security reviews.

How a campaign runs

01 Sequences received Send your designs and the assays you need	02 Synthesis and cloning Gene synthesis, codon optimization, in silico scoring, cloning	03 High-throughput expression HEK293, CHO or E. coli	04 Purification and QC Affinity capture, buffer exchange, QC	05 Developability and binding panels Run on the same purified material	06 Structured dataset delivered One model-ready record per sample
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The offering

One integrated service line from sequence file to decision-ready dataset. Run a full campaign or select modules.

Module	Area	Capabilities
High-throughput expression and purification	Expression hosts	HEK293 and CHO transient; E. coli
	Formats	Full-length IgG; Fab, scFv, VHH; Fc-fusions; bispecifics and multispecifics; custom recombinant antigens
	Front end	Vector design, gene synthesis and cloning; codon optimization and in silico developability scoring on every program
	Purification	Affinity- and tag-based capture; single- or multi-step; fully customized purification schemes, buffer exchange, and formulation
	Continuity	Constructs and plasmids retained, so candidates move to larger scale or a stable production without re-synthesis
Scale up production	Expression systems	HEK293 and CHO transient; HEK293 and CHO stable; E. coli
Developability panel	Thermal and colloidal	DSF; DLS
	Self-interaction and aggregation	AC-SINS; CSI-BLI; SMAC; analytical SEC; SEC-MALS
	Hydrophobicity	Analytical HIC
	Charge and heterogeneity	cIEF; IEX/CEX
	Purity and identity	CE-SDS (reduced and non-reduced); SEC-HPLC; LC-MS intact mass.
	Specificity and polyreactivity	Host-cell-protein and CHO cell-surface binding; ELISA vs. BVP, ssDNA, dsDNA, LPS, insulin, cardiolipin; CIC (cross-interaction chromatography)
Binding kinetics and epitope	Bio-layer interferometry (Octet)	Binding confirmation, KD, off-rate ranking and competition assays
	Surface plasmon resonance	Full kinetics for lead-stage candidates and low-affinity or hard-to-dissociate interactions
	Epitope binning	20 x 20 binning by Octet to cluster a panel by epitope before advancing candidates
Quality and release	Purity and identity	CE-SDS, SEC-HPLC and LC-MS on release material
	Endotoxin	LAL and gel-clot methods
Engineering and pre-formulation	Engineering	Humanization, affinity maturation and tuning, liability hot-spot repair, reformatting into bispecific and multispecific architectures
	Pre-formulation	pH and excipient screening, formulation optimization and confirmation, viscosity testing

Who this is for

AI-driven discovery teams <ul style="list-style-type: none"> Hundreds of designed variants per cycle Model-ready wet-lab and developability data 	Biologics programs with IP sensitivity <ul style="list-style-type: none"> Investor or data-governance requirements Data stays with one local partner
Geographically restricted programs <ul style="list-style-type: none"> Lab partner within North America Same clock, in-person reviews 	Groups consolidating outsourced work <ul style="list-style-type: none"> Eliminate shipping delays and lost material An extension of your lab
Start with a pilot project. Send sequences and assay details. We deliver one structured dataset. Shuji Sato ssato@mindwalkai.com mindwalkai.com	