



Risk Index.

Identifying Discovery Risks Early

Placeholder text Understanding where risk originates is only part of the solution, converting that awareness into structure protect scientific integrity as discovery advances.

Failure Point	Operational Impact	Scientific Consequence	Preventive Control
Unverified or weakly validated targets	Conflicting feasibility data	Misallocated resources and delayed go/no-go decisions	Apply orthogonal validation using independent antibodies and complementary assays
Sequence instability	Aggregation, charge asymmetry, hydrophobic surfaces	Low expression, poor solubility, and increased re-engineering	Incorporate recombinant antibody engineering and developability screening during feasibility
Novel formats without QC alignment	Expression instability in bispecific or single-domain antibodies	Delayed optimization and revalidation	Use VHH and recombinant workflows validated for stability, expression yield, and compatibility

Failure Point	Operational Impact	Scientific Consequence	Preventive Control
Reagent variability	Inconsistent supplier QC and non-standard documentation	Reduced reproducibility across assays and partners	Source reagents under unified QC documentation with lot bridging and traceable metadata
Limited biological validation	Unverified target engagement in tissue	Weak translational predictability	Confirm specificity using multiplex histology and spatial imaging on Lunaphore and Akoya systems
Fragmented documentation	Missing lineage, batch history, or provenance data	Lost traceability and delayed internal or partner review	Maintain centralized Certificates of Analysis and unified data packages from discovery onward
Inconsistent QC reporting	Repeated internal review cycles and duplicated analysis	Data treated as non-comparable	Adopt harmonized documentation schemas across discovery and development functions

Failure Point	Operational Impact	Scientific Consequence	Preventive Control
Non-standard reagent metadata	Unverified or inconsistent results across sites	Reduced reproducibility and confidence in shared data	Link QC and inventory systems within a controlled data environment
Lost lineage or lot tracking	Duplicated work and assay drift	Unverifiable antibody or conjugate provenance	Maintain traceable production and validation logs across antibody and conjugation workflows
Incomplete reproducibility record	Delayed partner or investor audits	Lower valuation confidence and stalled governance review	Generate integrated reproducibility reports and metadata traceability within unified documentation systems