

## Sample Requirements and Submission Guidelines

When possible, please connect with us at [cii@uhn.ca](mailto:cii@uhn.ca) prior to sample collection to discuss 1) study design and assay selection, 2) sample requirements and processing considerations, and 3) project feasibility and timelines. All samples must be clearly labeled and must not contain protected health information (PHI).

Service	Sample Type(s)	Sample Requirements	Sample Handling	Storage and Shipping
Immunohistochemistry	FFPE tissue sections or blocks  Fresh-frozen tissue sections or blocks	1-2x unstained slides per marker; 4-5 $\mu$ m thick sections mounted on positively charged slides and air-dried  1x H&E section or digitized H&E scan from the same tissue block  <i>Note: The CIIA can assist with tissue embedding, sectioning, and H&amp;E staining</i>	If possible, make unstained slides just prior to sample submission	FFPE: Store and ship at room temperature and protect from moisture  <u>Fresh-frozen</u> : Store at -80°C; ship on dry ice  Ship all slides in a rigid slide storage box (e.g. plastic or foam) to protect from them from damage
Multiplex Immunofluorescence <i>(Quanterix OPAL 6-Plex Detection Kit)</i>	FFPE tissue sections or blocks	1-3x unstained slides per panel; 4-5 $\mu$ m thick sections mounted on positively charged slides and air-dried  1x H&E section or digitized H&E scan from the same tissue block  <i>Note: The CIIA can assist with tissue embedding, sectioning, and H&amp;E staining</i>	If possible, make unstained slides just prior to sample submission	FFPE: Store and ship at room temperature and protect from moisture  Ship all slides in a rigid slide storage box (e.g. plastic or foam) to protect from them from damage
Flow Cytometry	Fresh whole blood  Fresh or viably cryopreserved PBMCs  Fresh or viably cryopreserved single-cell suspensions from tissues or fluids	<u>Whole blood</u> : $\geq 0.5$ mL per panel  <u>Fresh cells</u> : $\geq 5 \times 10^5$ cells per panel; viability $\geq 80\%$ recommended  <u>Viably cryopreserved cells</u> : $\geq 1 \times 10^6$ cells per panel; viability $\geq 80\%$ recommended  <i>Note: The CIIA can assist with blood, tissue and fluid processing</i>	Whole blood should be collected in NaHep or EDTA tubes  PBMCs should be isolated within 48 hours of blood collection (in NaHep or EDTA tubes)  Single-cell suspensions from tissues or fluids should be isolated within 48 hours of collection  Avoid freeze-thawing viably cryopreserved samples	<u>Whole blood</u> : Store and ship at room temperature within 48 hours; <u>do NOT freeze</u>  <u>Fresh cells</u> : Transfer on ice within 1 hour of isolation  <u>Cryopreserved cells</u> : Store in LN2 storage; ship on dry ice
CytoF	Fresh or viably cryopreserved PBMCs  Fresh or viably cryopreserved single-cell suspensions from tissues or fluids	<u>Fresh cells</u> : $\geq 1 \times 10^6$ cells per panel; viability $\geq 80\%$ recommended  <u>Viably cryopreserved cells</u> : $\geq 1 \times 10^6$ cells per panel; viability $\geq 80\%$ recommended  <i>Note: The CIIA can assist with blood, tissue and fluid processing</i>	PBMCs should be isolated within 48 hours of blood collection (in NaHep or EDTA tubes)  Single-cell suspensions from tissues or fluids should be isolated within 48 hours of collection  Avoid freeze-thawing viably cryopreserved samples	<u>Fresh cells</u> : Transfer on ice within 1 hour of isolation  <u>Cryopreserved cells</u> : Store in LN2 storage; ship on dry ice
Multiplex Cytokine Analysis <i>(Luminex)</i>	Frozen serum  Frozen plasma  Frozen cell culture supernatant	200 $\mu$ L per panel  <i>Note: The CIIA can assist with blood processing</i>	Plasma and serum should be isolated within 48 hours of blood collection  Centrifuge cell culture supernatants to remove debris before aliquoting  Avoid freeze-thawing samples	Store at -80°C; ship on dry ice