

<b>DATE:</b>	27 June 2025
<b>TO:</b>	All Healthcare Providers and zone Medical Officers of Health, Alberta Health and Alberta Health Services
<b>FROM:</b>	Alberta Precision Laboratories (APL) – Public Health Laboratory
<b>RE:</b>	<b>Measles Immunity (IgG) Testing Add-on to Prenatal Blood Samples</b>

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## PLEASE POST OR DISTRIBUTE AS WIDELY AS APPROPRIATE

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### Key Message

- Effective immediately, measles IgG testing for immunity on stored prenatal bloods from pregnant persons can be requested by following the process below
- Prenatal bloods are stored for up to 12 months from the collection date for the current pregnancy
- Complete a FAX add on-request available at <https://www.albertahealthservices.ca/frm-20721.pdf> or attached document. You must FULLY complete this form especially providing:
  - Patient name and PHN/ULI
  - Serum accession number which is posted in Netcare within the Microbiology Folder as Prenatal Infectious Disease Panel (Serology) tab
  - Date of sample collection
  - Order measles immunity/measles IgG -Lab 657
- The measles IgG results will be posted within 1 to 3 days after the FAX request is received at the Public Health (ProvLab)

### Background

- With the on-going measles outbreak in Alberta, pregnant women are at significant risk of exposure and infection especially in the zones with high measles activity. At significant risk for infection are persons with no vaccination, or with one dose or unknown vaccine status. Data from this outbreak indicates a 5% risk of measles infection in persons with two doses of measles-containing vaccine (<https://www.alberta.ca/measles>).
- Measles infection in pregnancy can have severe outcomes both for the mother and newborn. For the mother these are; premature delivery (25%), miscarriages and fetal demise (16.7%) and maternal hospitalization (80%) primarily related to measles associated pneumonias (1). As well there is a risk of transmission to the newborn at delivery which then requires monitoring and isolation of the neonate in the first week after delivery.
- Some countries in the world provide only a single dose of measles vaccine in their national immunization programs, which is sufficient to produce rubella immunity but may not result in measles immunity. A positive antenatal rubella titre for a New Canadian could, therefore, not be indicative of measles immunity.
- This group should be considered for measles antibody testing especially if they reside in zones with high measles activity.



- A US study performed in 2006 found that for pregnant persons with demonstrable immunity to rubella only 88% had detectable measles IgG antibody suggesting that pregnant women with an exposure should be evaluated for immunity to measles (2).

### **Action Required**

- When a pregnant person is exposed to a case of measles or residing in an area with on-going measles activity:
  - Review their vaccination records to assess if they are fully vaccinated as recommended by the Alberta immunization schedule at <https://myhealth.alberta.ca/topic/Immunization/Pages/default.aspx>
  - Pregnant women with low rubella titres (10 IU/mL or less) should have a measles IgG immunity test performed
  - Pregnant New Canadians should have their measles IgG tested unless their vaccine records show equivalence to Alberta vaccination schedules
  - All pregnant women with an exposure should be monitored for up to 21 days for signs of a measles infection
  - Contact the zone Medical Officer of Health or the Microbiologist/Virologist-on-Call (Calgary 403-944-1110, Edmonton 780-407-8822) for questions on measles testing

### **Questions/Concerns**

- Dr. Kevin Fonseca, Clinical Virologist, APL - Public Health Microbiology ([kevin.fonseca@albertaprecisionlabs.ca](mailto:kevin.fonseca@albertaprecisionlabs.ca))

### **Approved by**

- Dr. Graham Tipples, Medical-Scientific Director, Public Health, APL

### **References:**

1. Varner C. Pregnant and bearing the burden of measles outbreaks in Canada. CMAJ. 2025 Jun 8;197(22):E627-E628. doi: 10.1503/cmaj.250820. PMID: 40490279; PMCID: PMC12154383.
2. Kennedy CM, Burns BA, Ault KA. Does rubella immunity predict measles immunity? A serosurvey of pregnant women. Infect Dis Obstet Gynecol. 2006;2006:13890. doi: 10.1155/IDOG/2006/13890. PMID: 17485795; PMCID: PMC1581459.



**ProvLab Add On Test Fax**

Written documentation of add-on laboratory tests is required. Processing will not occur until receipt of faxed authorization.

Lab Information		Lab Use (Data Entry function)
<input type="checkbox"/> CALGARY ProvLab 3030 Hospital Dr NW Calgary, Alberta, T2N 4W4 Tel: (403) 944-1200	<input type="checkbox"/> EDMONTON ProvLab 8440-112 Street Edmonton, Alberta, T6G 2J2 Tel: (780) 407-7121	Orderable:
Fax: 403-270-2216	Fax: 780-407-3864	Order Comment: ADTEST

Complete this section.			
<b>Patient/Specimen Information</b>	Requester Full Name (PRINT): MOC/VOC? <input type="checkbox"/> YES <input type="checkbox"/> NO (Last) (First) (Initial)	Date and time of add-on test: dd   mon   yyyy time (hh:mm)	
	Ordering Physician/Practitioner: Physician Code:	Requester Phone:	
	Ordering Address / Location:	Requester Fax:	
	Patient Name (PRINT): (Last) (First) (Initial)	<input type="checkbox"/> PHN: OR <input type="checkbox"/> Other Unique Identifier (specify):	
	Sample Accession Number:	Lab staff name/initials:	
	Sample Type	Sample Source	Date and time of original sample collected: dd   mon   yyyy time (hh:mm)
	Test(s) to be added: <input type="checkbox"/> Routine <input type="checkbox"/> Priority <input type="checkbox"/> Stat	<input type="checkbox"/> Add-on test communicated via:	

Complete this section. Fax to the lab indicated above:	
<input type="checkbox"/> I have verified that the patient name and PHN/other unique identifier are correct as written above. (NOTE: Contact the lab if any information provided above is incorrect)	
<b>Check ONLY ONE response below:</b>	
<input type="checkbox"/> I have verified that the Ordering Physician /Practitioner information above is complete and request report to be sent there.	
<input type="checkbox"/> I request the report for this add-on test to be sent to above location AND to another Physician/Practitioner as completed below (write legibly).	
Physician/Practitioner Name:	Phone:
Physician/Practitioner Address /Location:	Fax:
<input type="checkbox"/> Requester's Signature:	Date and time: dd   mon   yyyy time (hh:mm)

LAB USE: Complete this section if add on tests cannot be performed for the following reasons:	
<input type="checkbox"/> Insufficient sample quantity	<input type="checkbox"/> Test Cancelled by:
<input type="checkbox"/> Compromised sample quality	Tech (name and initials):
<input type="checkbox"/> Other:	