

Materials List for:**Quantitative Analyses of all Influenza Type A Viral Hemagglutinins and Neuraminidases using Universal Antibodies in Simple Slot Blot Assays**Caroline Gravel^{*1}, Changgui Li^{*2}, Junzhi Wang², Anwar M Hashem^{1,3,4}, Bozena Jaentschke¹, Gary Van Domselaar⁵, Runtao He⁵, Xuguang Li^{1,3}¹Centre for Vaccine Evaluation, Biologics and Genetic Therapies Directorate, HPFB, Health Canada²National Institute for the Control of Pharmaceutical and Biological Products, The State Food and Drug Administration, Beijing³Department of Biochemistry, Microbiology and Immunology, University of Ottawa⁴Microbiology Department, Faculty of Medicine, King Abdulaziz University⁵National Microbiology Laboratory, Public Health Agency of Canada^{*}These authors contributed equallyCorrespondence to: Junzhi Wang at wangjz@nicpbp.org.cn, Xuguang Li at sean.li@hc-sc.gc.caURL: <https://www.jove.com/video/2784>

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Materials

Name	Company	Catalog Number	Comments
Bio-Dot SF Microfiltration Apparatus	Bio-Rad	170-6542	
Bio-Dot SF Filter paper	Bio-Rad	162-0161	
Immobilon-FL transfer membrane (PVDF)	EMD Millipore	IPFL00010	
Vacuum pump	EMD Millipore	WP6111560	
Chemiluminescence BioMax Light Film	Kodak	178 8207	
FluorChem Gel Documentation System	Alpha Innotech	29-008-1896X	
Universal rabbit antibodies against HA and NA antigens		Uni-1 (HA)HCA-2, HCA-3 (NA)	Antibodies are available through MTA or can be generated by interested investigators according to the procedures previously described ^{6,7} .
Influenza vaccine reference antigen	CBER/FDA or NIBSC		
Influenza vaccine samples			Commonly available in most countries
Urea	Sigma-Aldrich	U1250	
Zwittergent 3-14 Detergent	Calbiochem	693017	
Tween-20	Fisher Scientific	BP337-500	
Blotting Grade Blocker Non-fat dry milk	Bio-Rad	170-6404	
ImmunoPure Goat Anti-Rabbit IgG, (H+L), Peroxidase Conjugated	Thermo Fisher Scientific, Inc.	31460	
SuperSignal West Dura Extended Duration Substrate	Thermo Fisher Scientific, Inc.	34075	