

Viruses that Cause Flu-Like Symptoms & Information about Other Viruses of Interest for ELISA Adaptations

Influenza A

- Zoonotic, can lead to epidemics/pandemics
- Symptoms: fever, chills, muscle aches, cough, congestion, runny nose, headache, fatigue

Influenza B

- Only in humans, can lead to epidemics/pandemics
- Symptoms: fever, chills, cough, sore throat, runny nose, muscle & body aches, headaches, fatigue, some gastrointestinal

Influenza C

- Only in humans, no epi/pandemics
- Symptoms: same as B, but much less severe

Adenovirus

- Nonenveloped, double stranded DNA virus
- CD46 & CD80/86 proteins ('knob' at end of fiber)
- 6 subgroups A-F
- Causes respiratory, kidney & urinary tract infections, gastroenteritis and keratoconjunctivitis
- Symptoms of respiratory infection: fever, sore throat, cough, runny notes, sometimes bronchitis and pneumonia

Zika virus

- Enveloped RNA virus
- E glycoprotein, (Asn154 glycosylation site)
- Similar in structure to Dengue and other flaviviruses
- Symptoms: fever, rash, headache, joint & muscle pain, conjunctivitis (most show only mild symptoms) **microcephaly

Cytomegalovirus

- Double stranded DNA; Herpes family
- ppp65 (immune evasion) pp150 & pp28 (assembly and egress)
- Symptoms: mild to no symptoms in healthy/nonimmunocompromised people; can mimic mononucleosis: fever, sore throat, fatigue, swollen glands, muscle & body aches

Respiratory Syncytial Virus

- Single stranded RNA virus
- G & F proteins
- Symptoms
 - Typical: congestion, dry cough, low grade fever, sore throat, mild headache
 - Rarely: fever, severe cough, wheezing, cyanosis

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Rhinovirus

- Single stranded RNA virus
- VP1-VP4 proteins
- Symptoms: sore throat, runny nose, cough, sneezing, headaches, body aches, low-grade fever

Sources:

Adenovirus

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Zika

<https://www.niaid.nih.gov/news-events/structure-zika-virus-determined>

<http://www.purdue.edu/newsroom/releases/2016/Q1/researchers-reveal-zika-virus-structure,-a-critical-advance-in-the-development-of-treatments.html>

<https://www.cdc.gov/zika/symptoms/symptoms.html>

Cytomegalovirus

<https://virologyj.biomedcentral.com/articles/10.1186/1743-422X-9-22>

<https://www.cdc.gov/cmvp/overview.html>

RSV

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4054448/>

Rhinovirus

<http://cmr.asm.org/content/26/1/135.full>