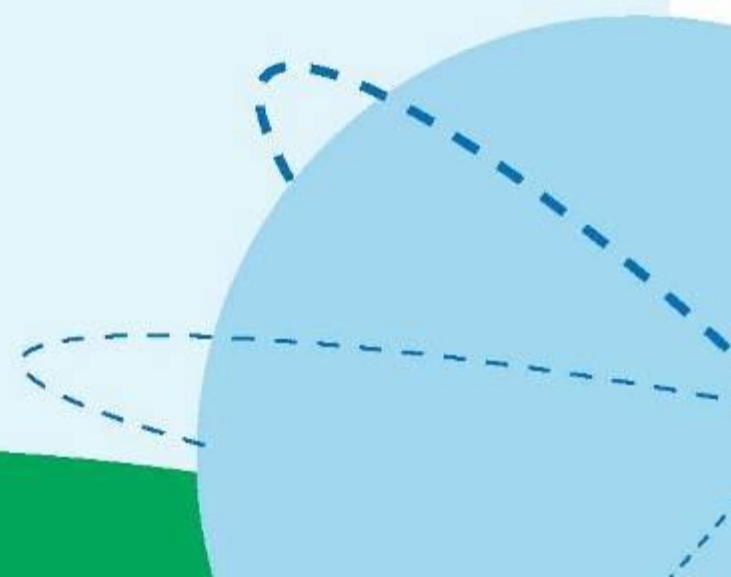




RNA standards for avian influenza and *Newcastle disease virus* specific RT-qPCRs



RNA run-off transcripts for AIV/NDV

Universal IC

Eurasian control

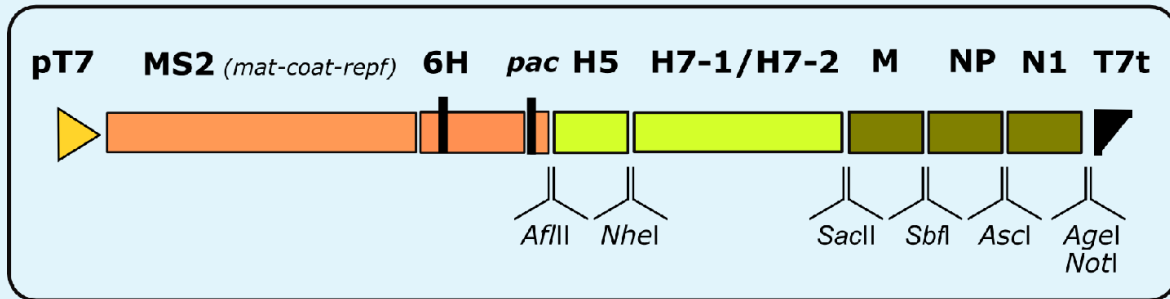
American control

Newcastle controls

**Plasmids,
transcripts
available, but
no armored
RNA**

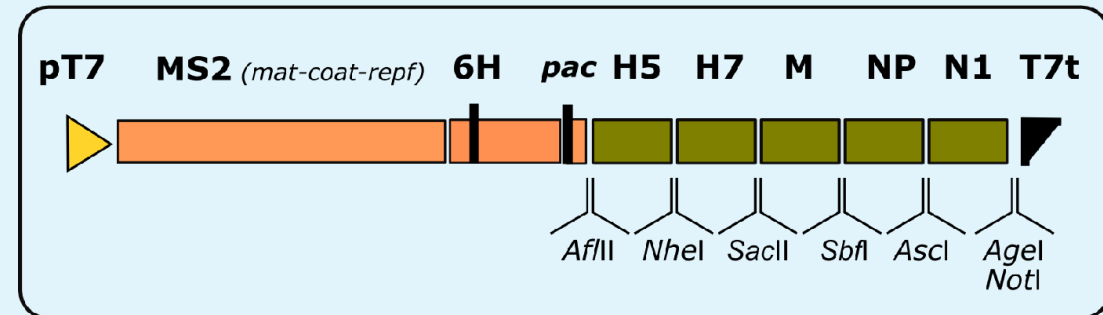
AIV

US



M – Spackman et al.
H5, H7-1,-2 US –
Spackman
et al. (old/new)

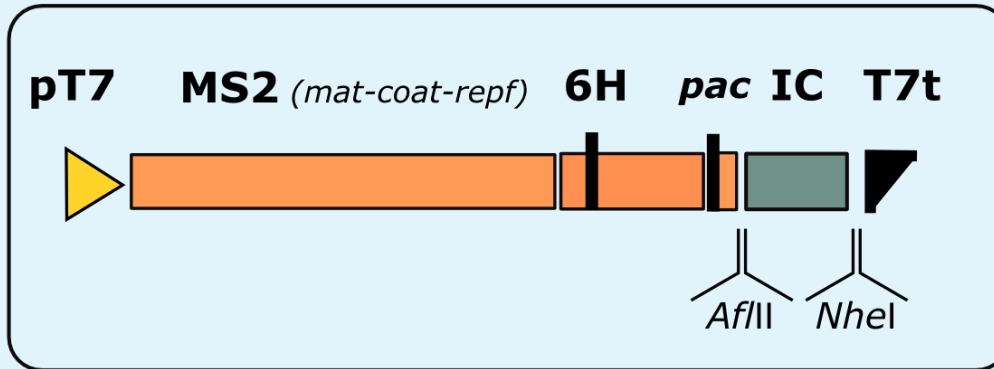
EU



H5, H7 – Slomka et al.
NP, N1 – Hoffmann et al.

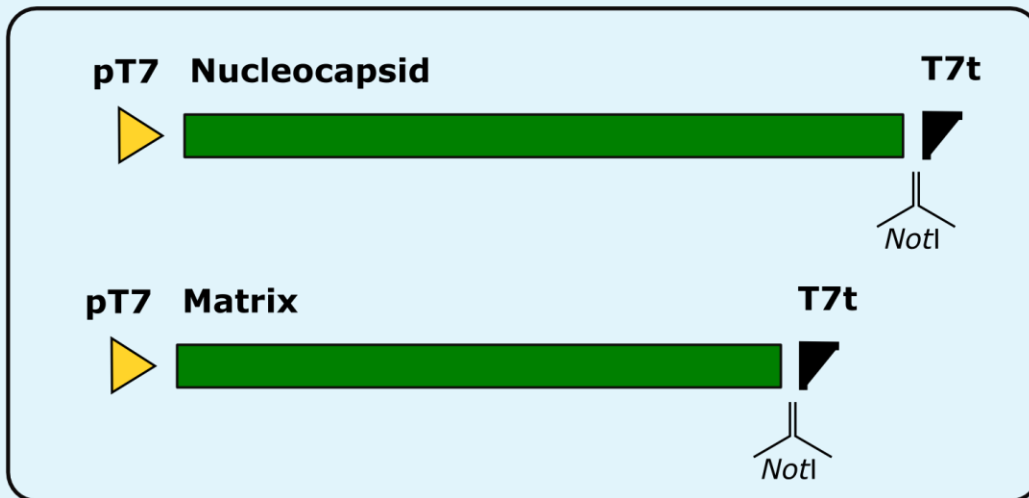
IC, NDV

IC



IC2 – Hoffmann et al., 2007

NDV



Newly developed
NP-specific PCR
(Waeckerlin et al.)

M-specific PCR
by Wise et al.

Considerations

Copy-based standards generally not required for diagnostic applications

- **Naturally armored control available**

Required for quantitative research applications

- **Most groups have their own standard**

- **Switch of standards would require methodological adaptations and might challenge comparability**

Reconsider usefulness and design of RNA standards

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