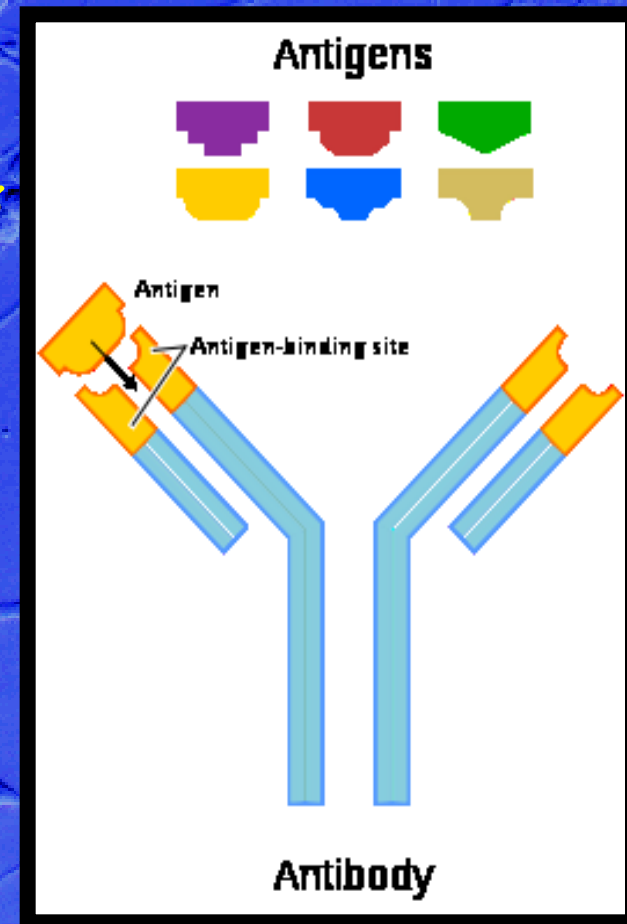


Protilátky - Ab = antibody

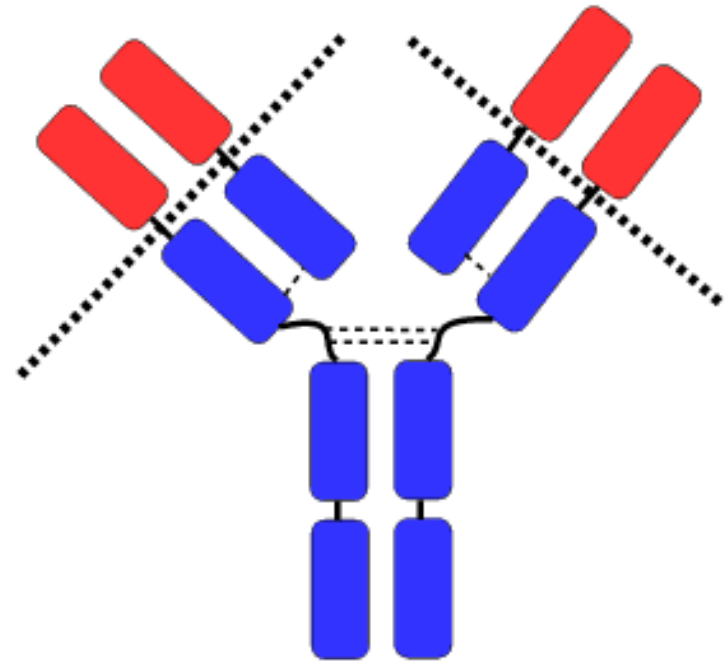
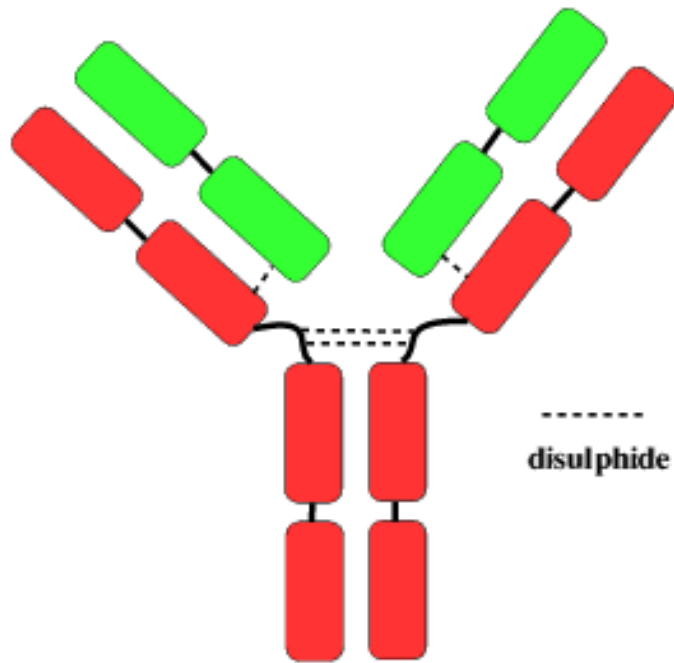
- produkt plasmatických buněk (zralé B-lymfocyty)
- bílkovina/protein, 4 proteinové řetězce, 2 lehké a 2 těžké
- rozpoznání cizorodého materiálu - antigenu
=> regulace imunitních/obránných reakcí
- detekce antigenů ve výzkumu
- antigen - látka na kterou je protilátka se schopná specificky navázat
- imunogen - struktura schopná vyvolat tvorbu protilátek
- monoklonální x polyklonální => dle původu (jeden nebo více klonů produkujících buněk)
- primární x sekundární x terciální => dle použití...



Basic structure of an Antibody

Light chain

Variable region



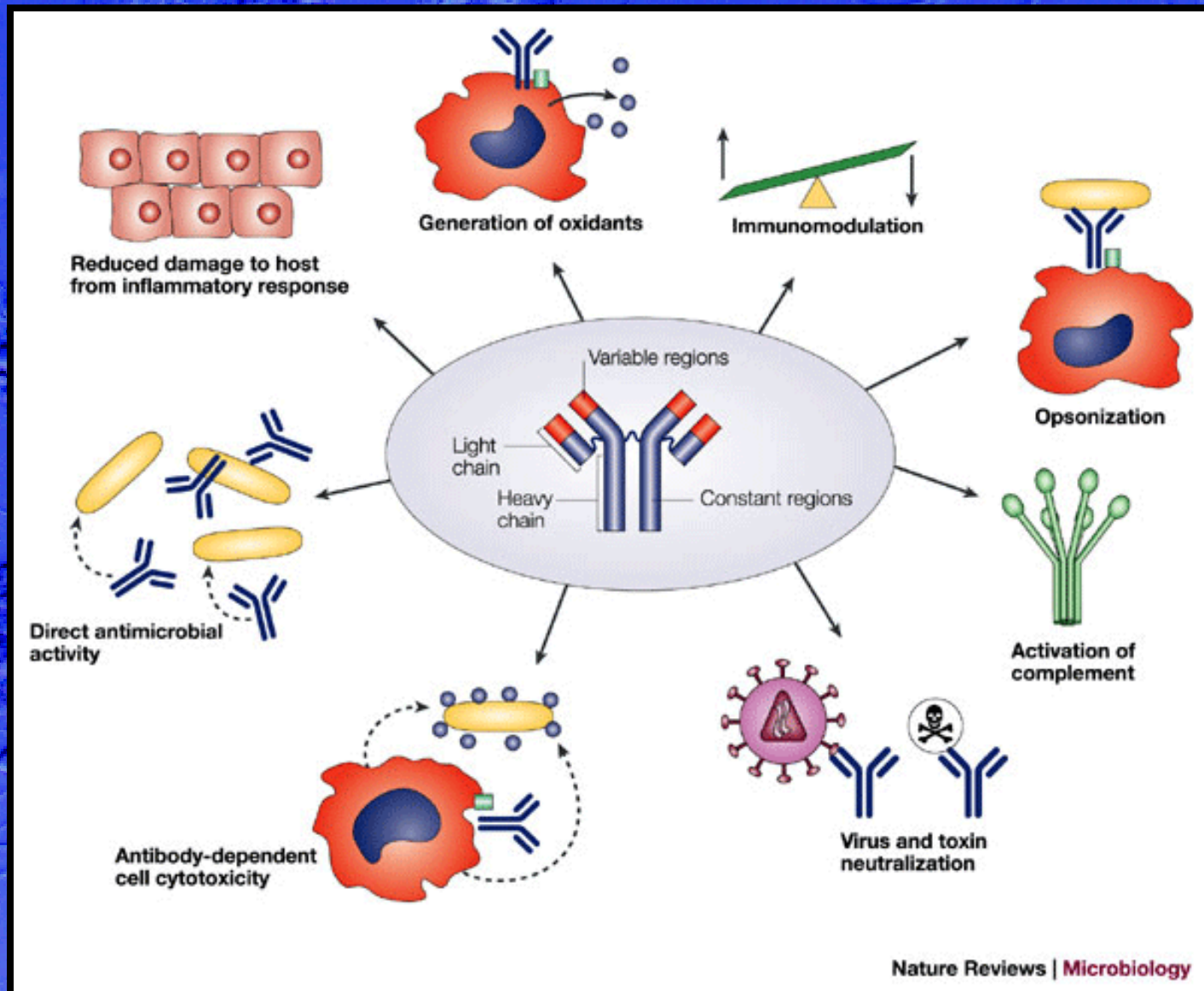
disulphide bond

Heavy chain

Constant region

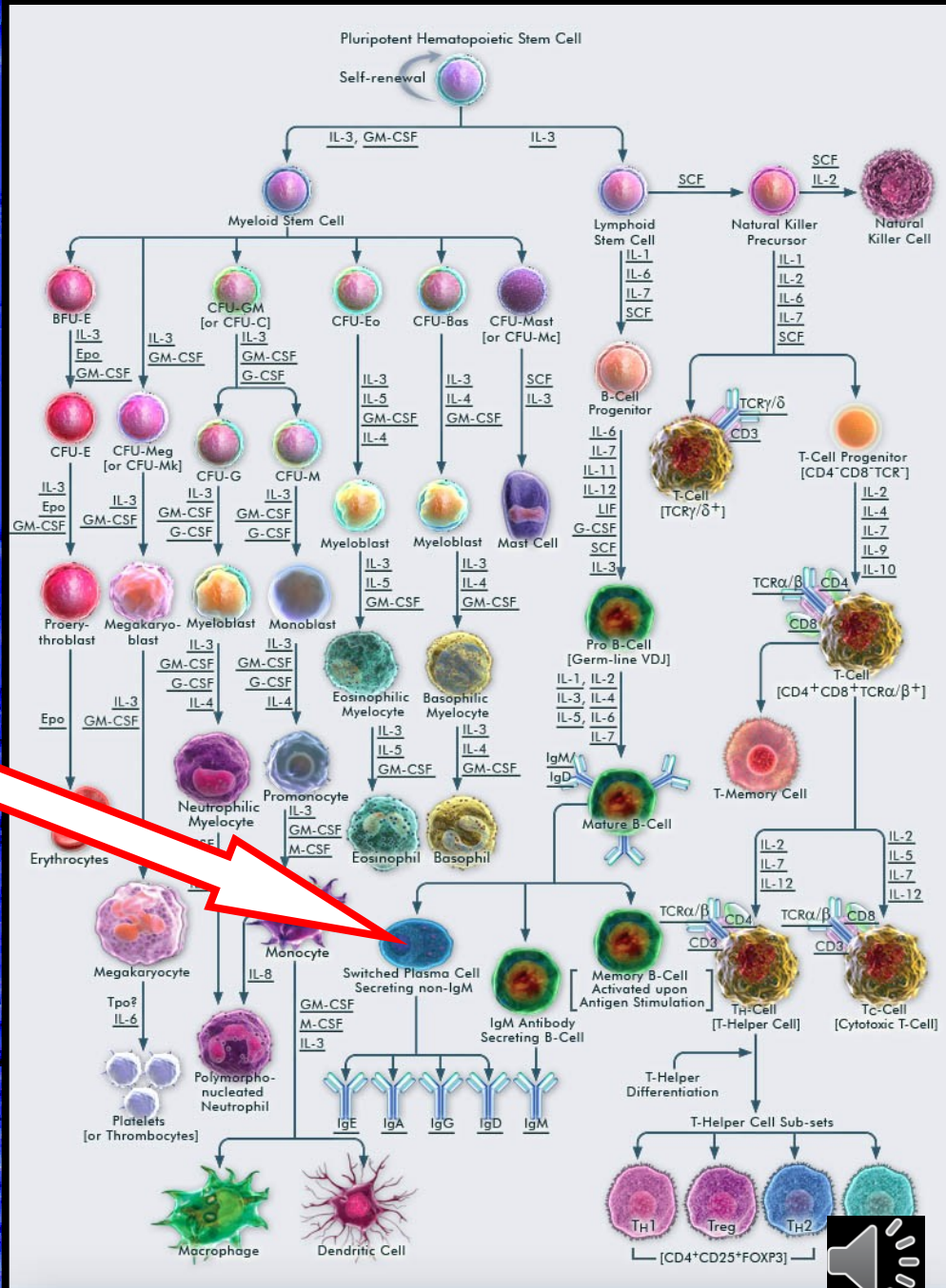
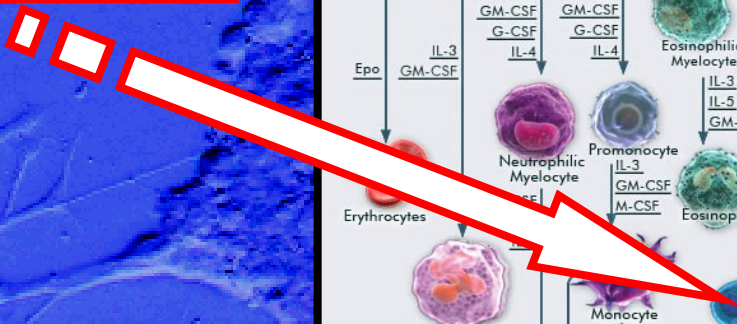


Úloha protilátek v organismu



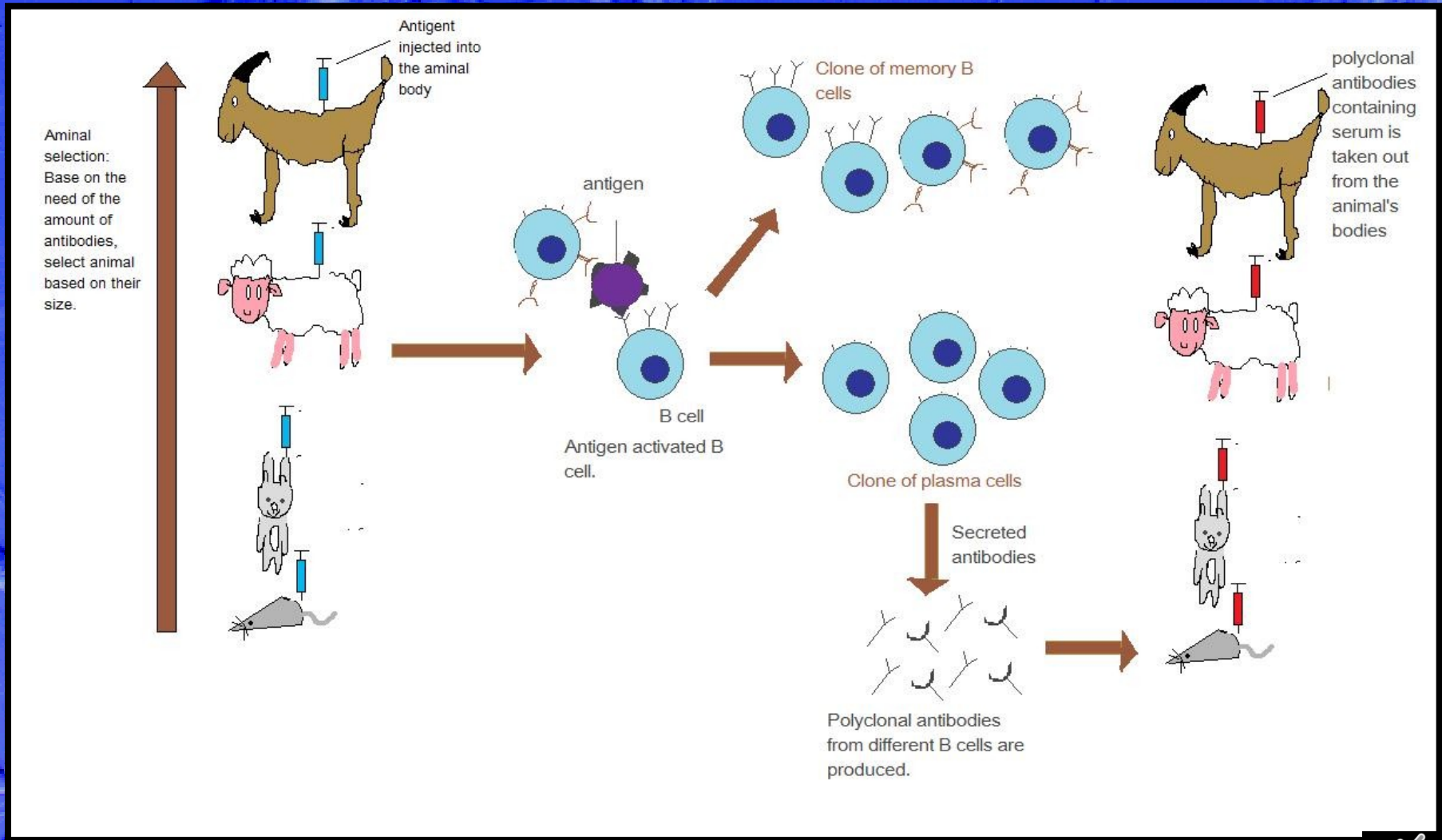
Kde protilátky vznikají?

Jsou produkovány plasmatickými B-lymfocyty!



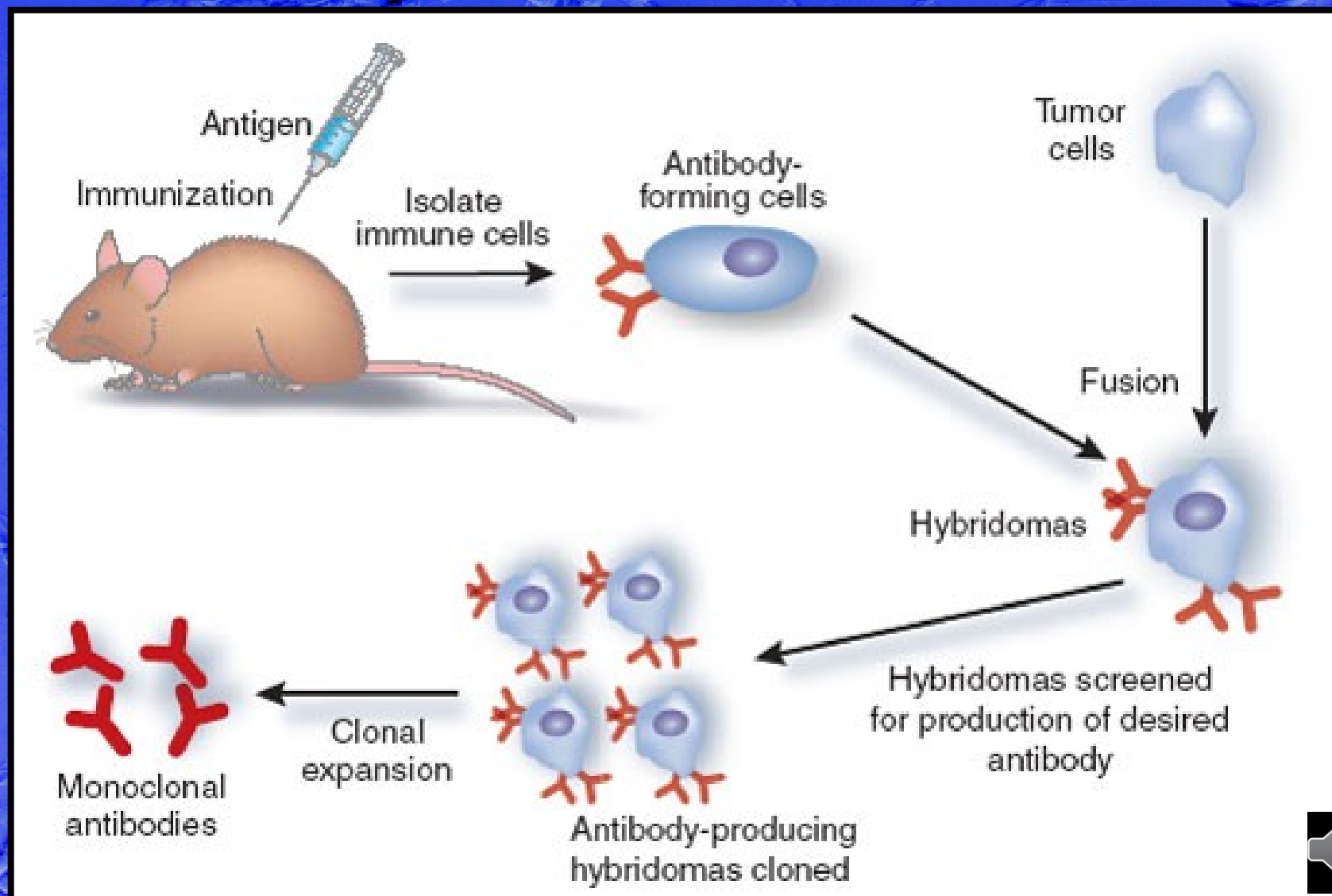
Polyklonální protilátky

- původem z více klonů

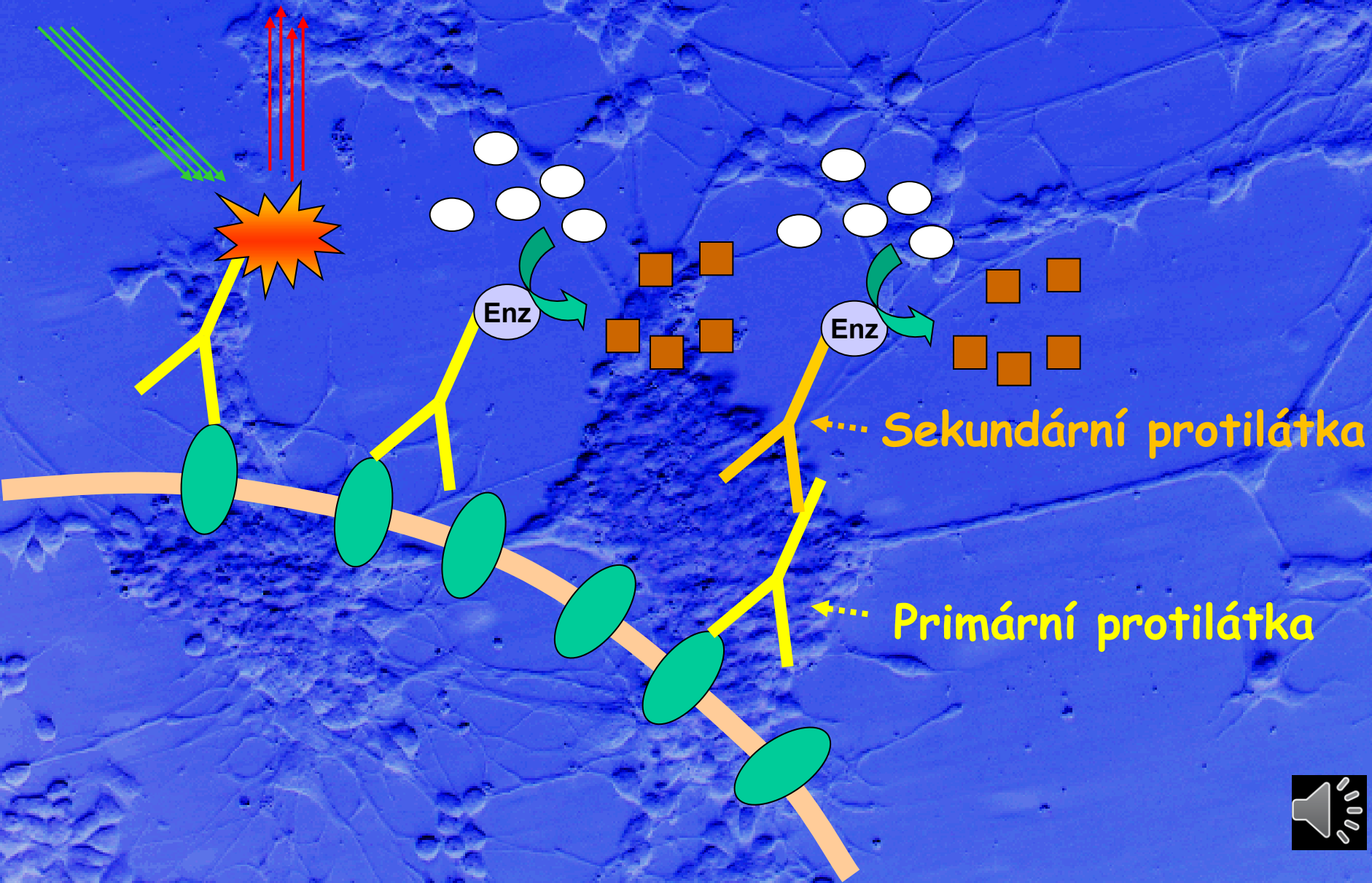


Monoklonální protilátky

- původem z jediného klonu!!!



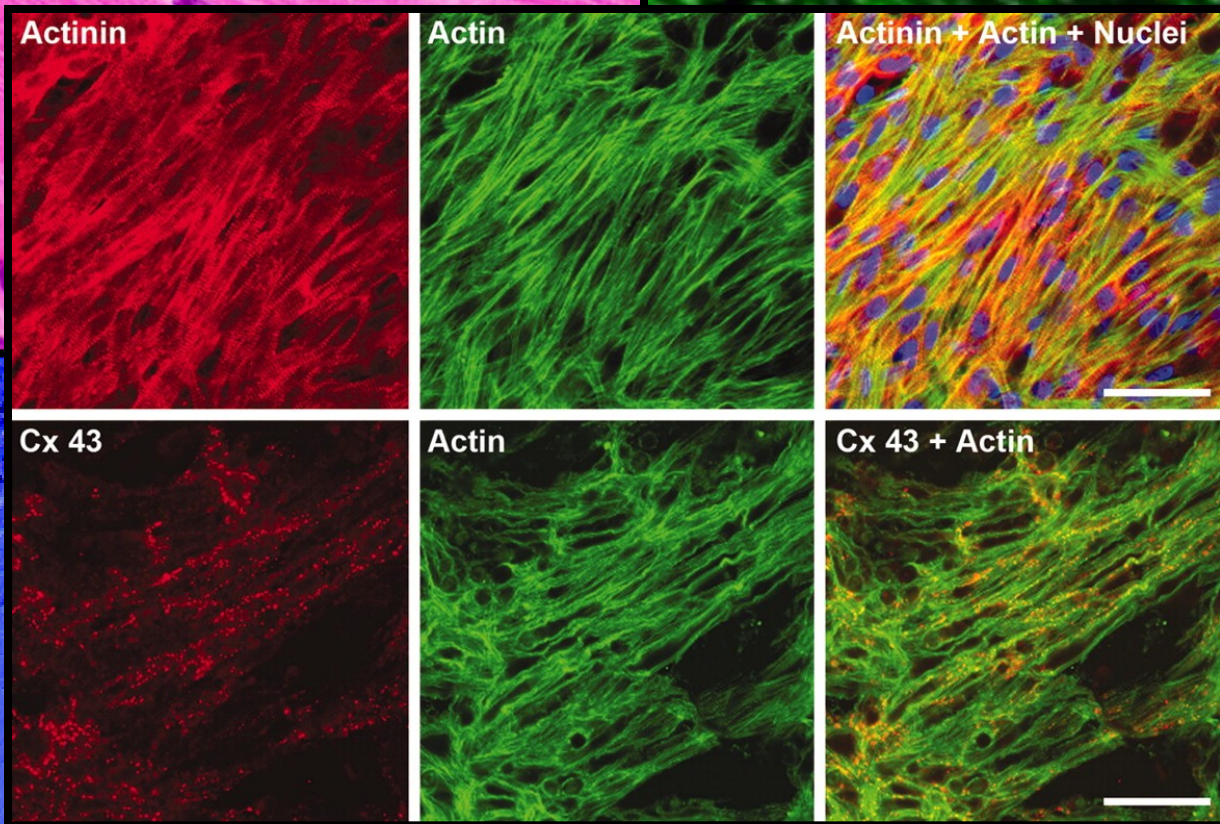
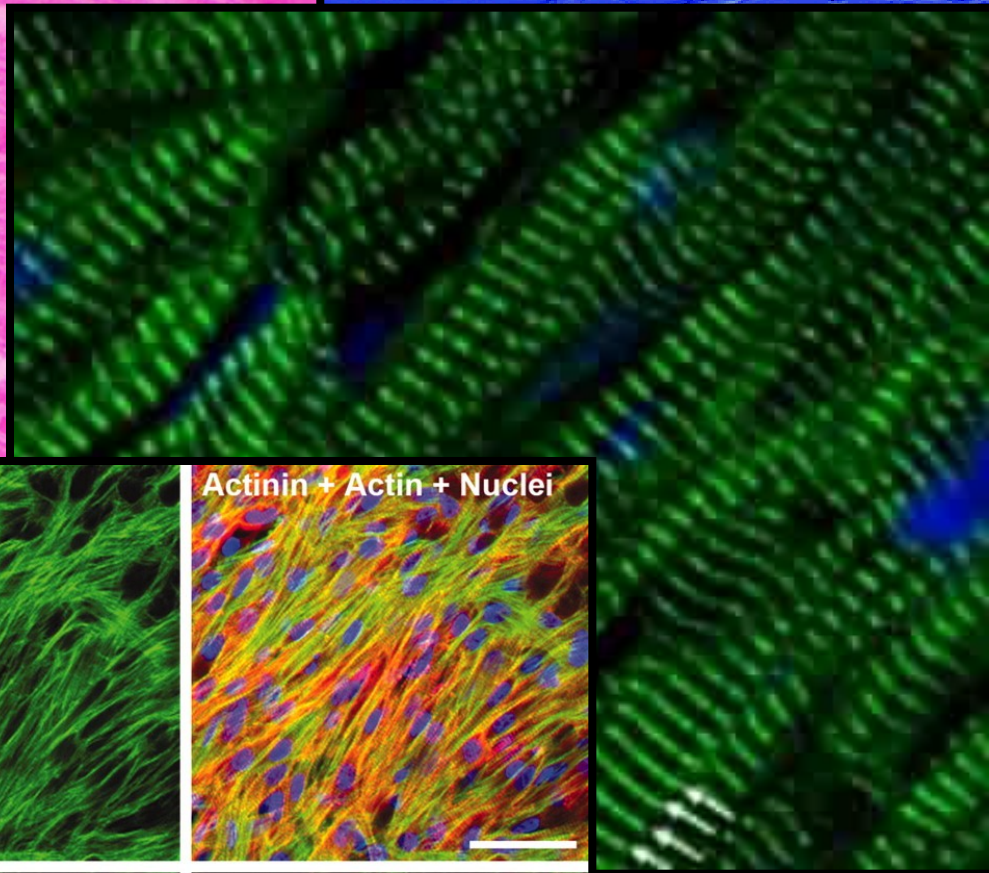
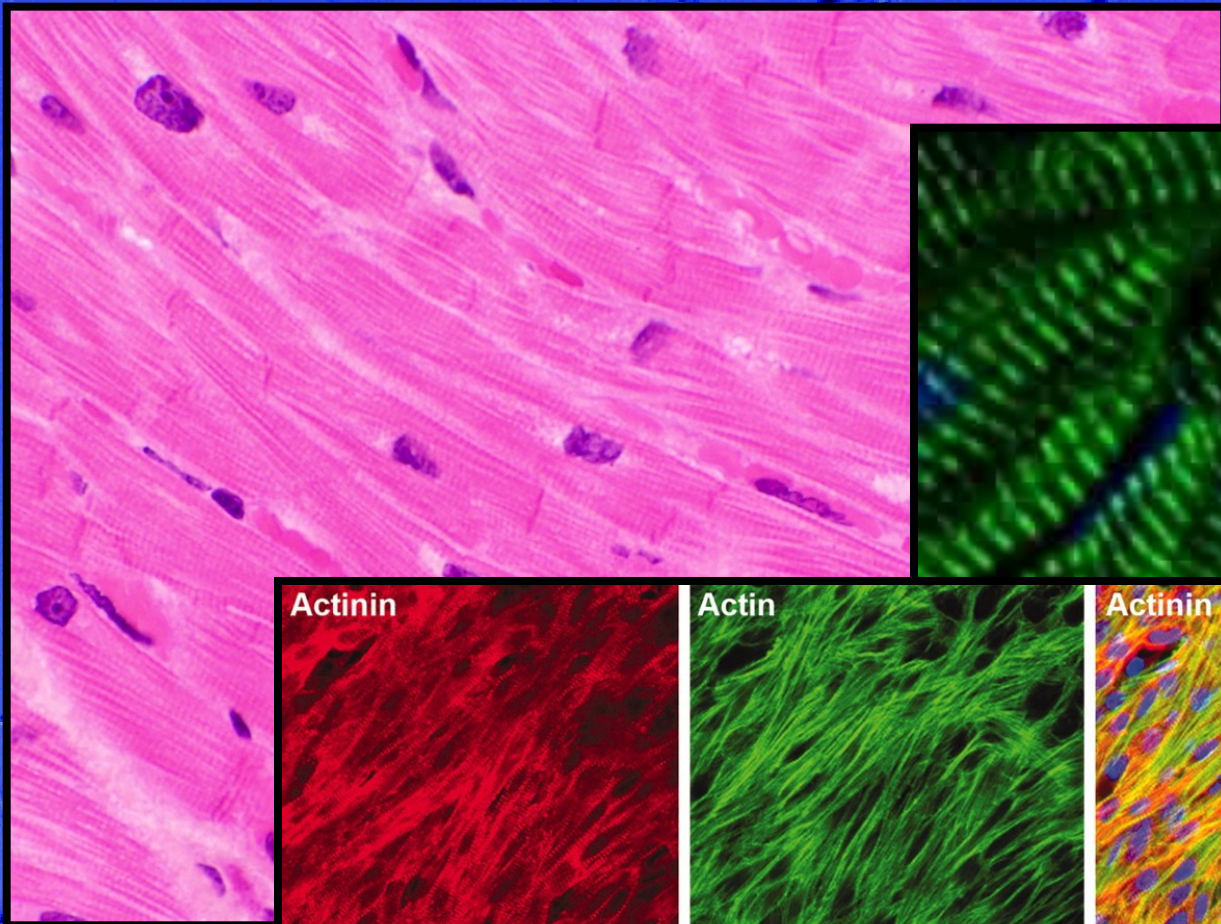
Schematický princip imunodetekce

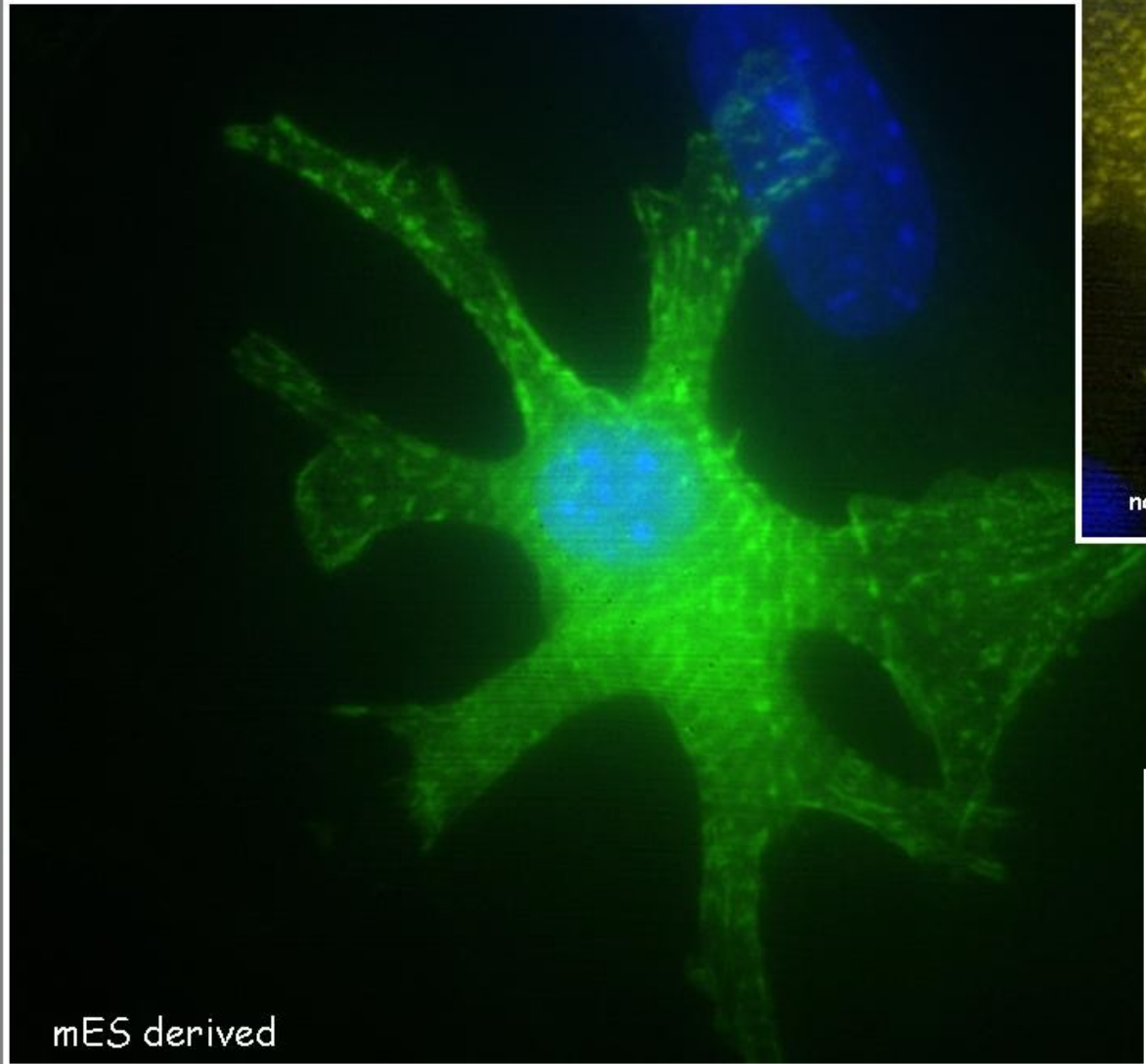


← Sekundární protilátka

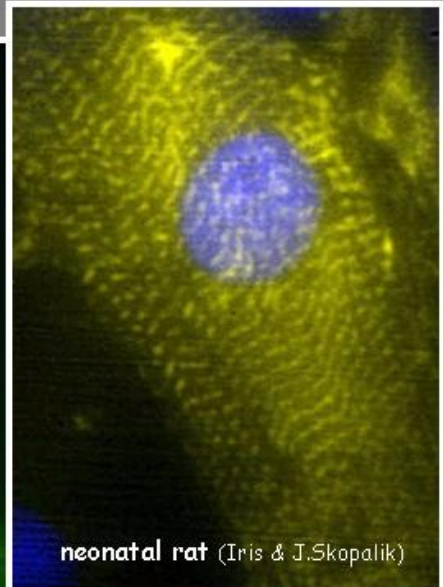
← Primární protilátka



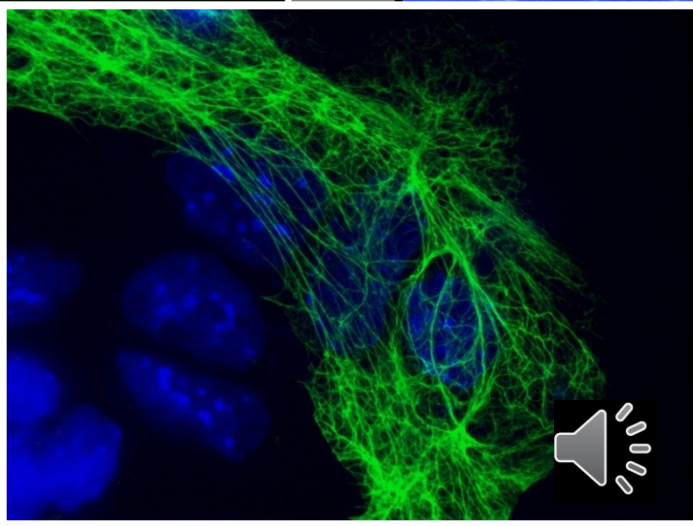


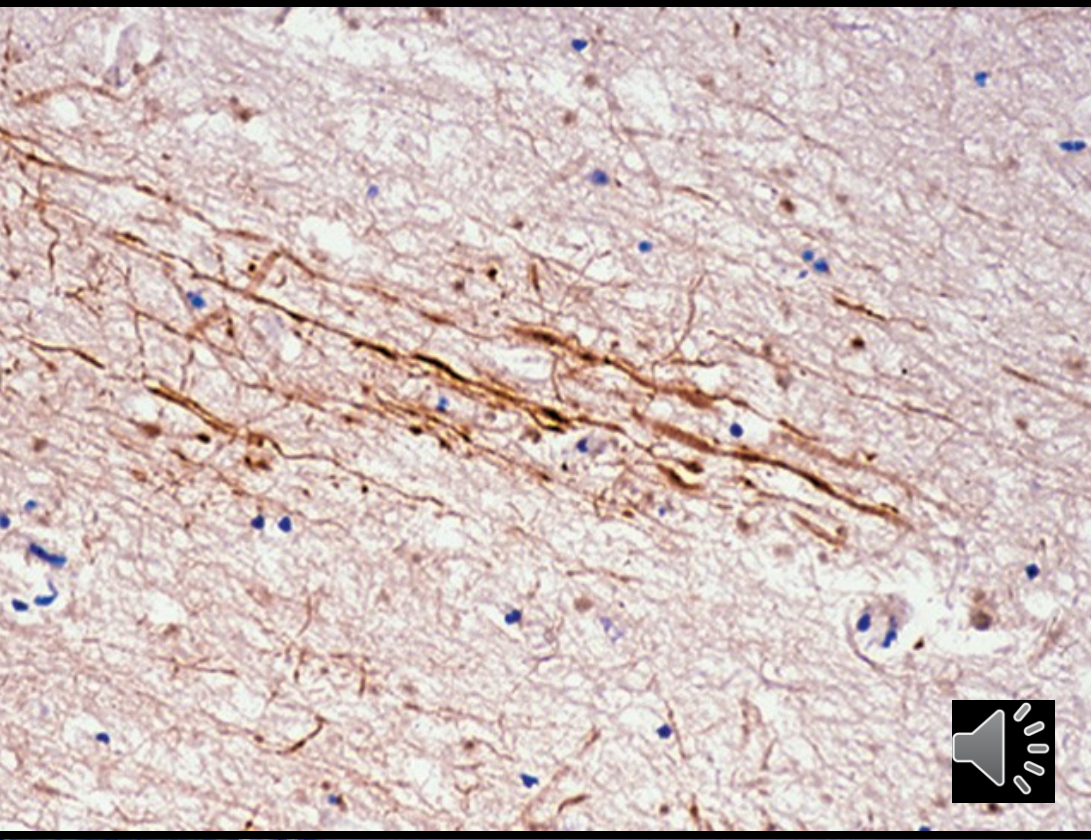
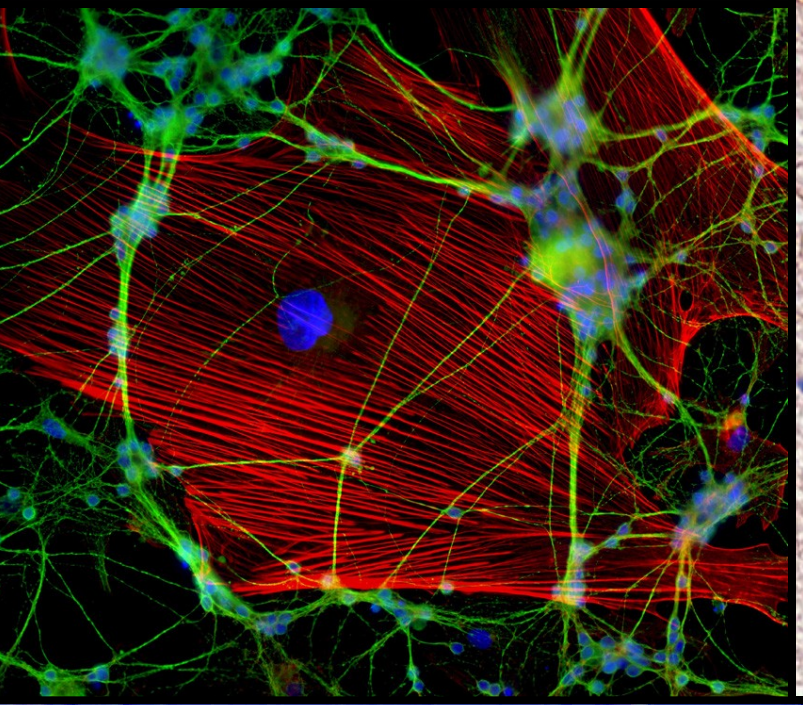
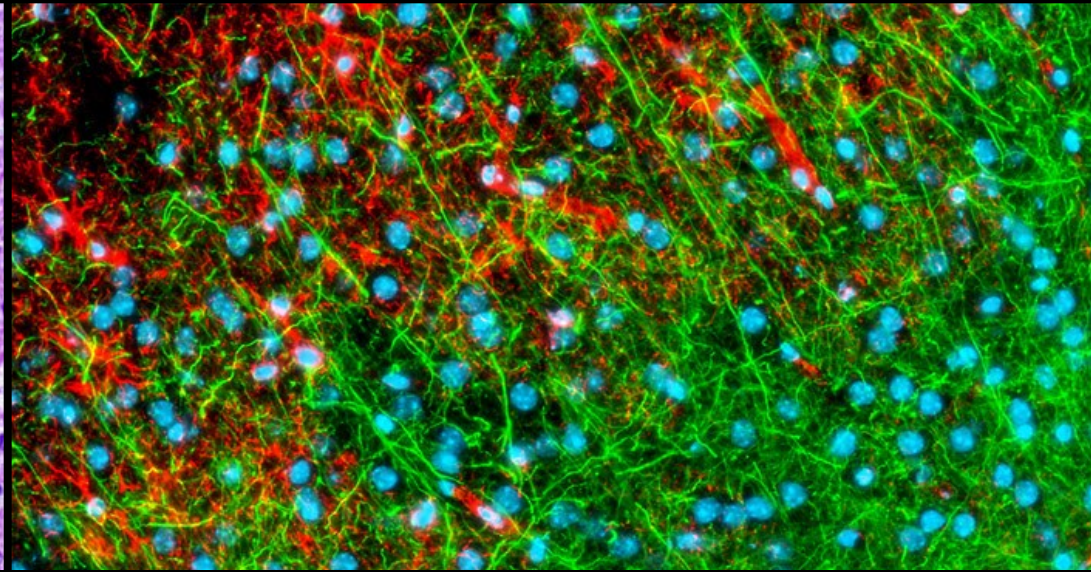
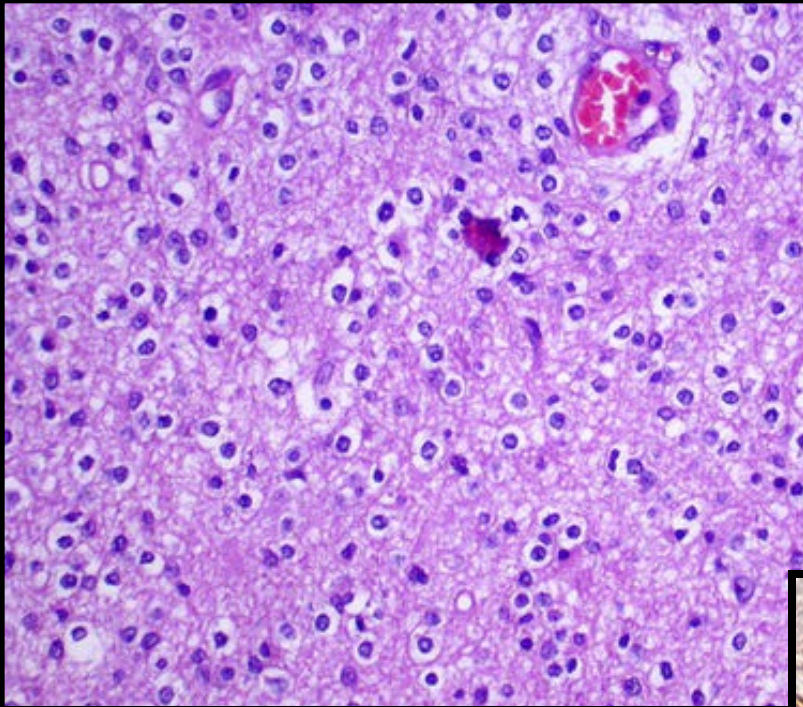


mES derived

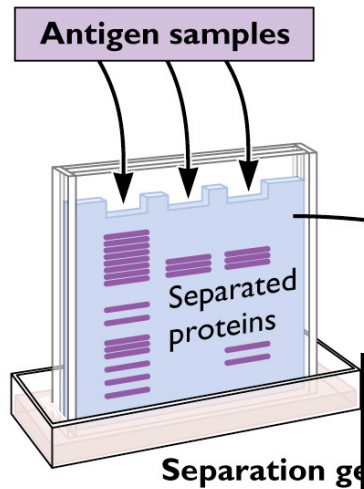


neonatal rat (Iris & J.Skopalik)

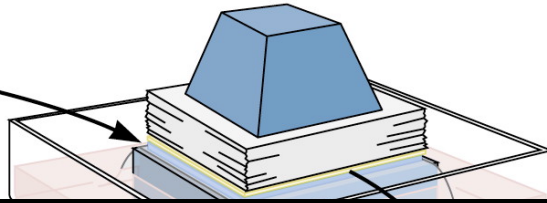




Western blot



Blotting tank
Proteins transferred to nitrocellulose sheet (blot)



Detection in Western Blots

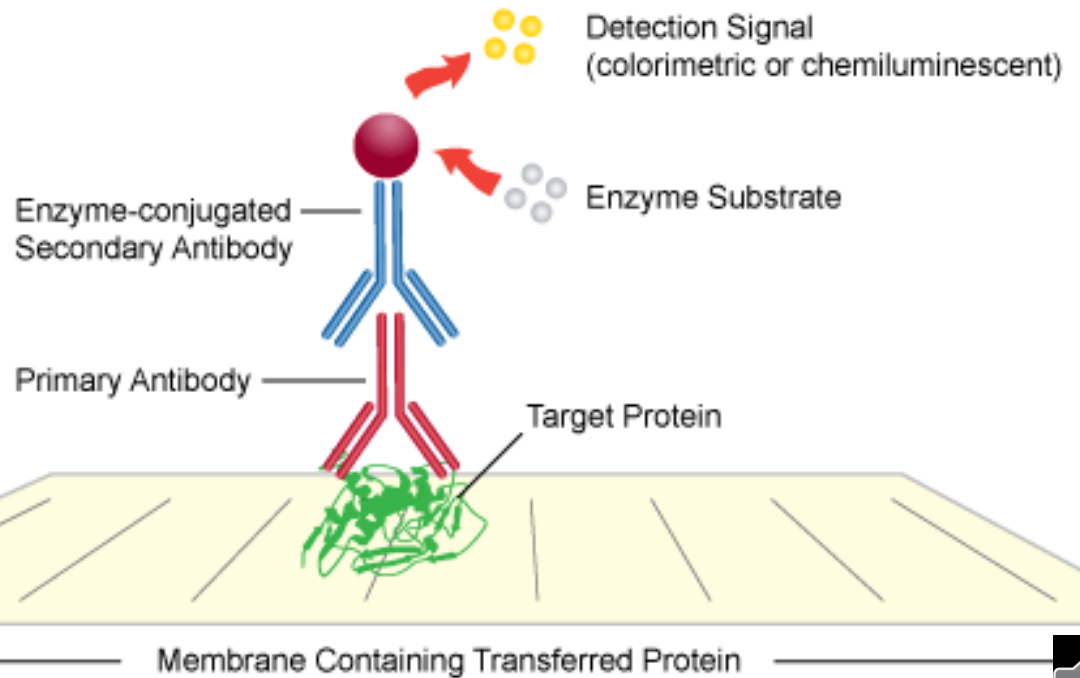
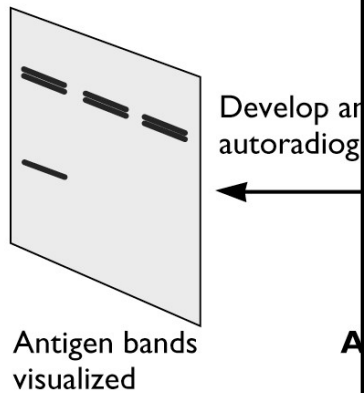


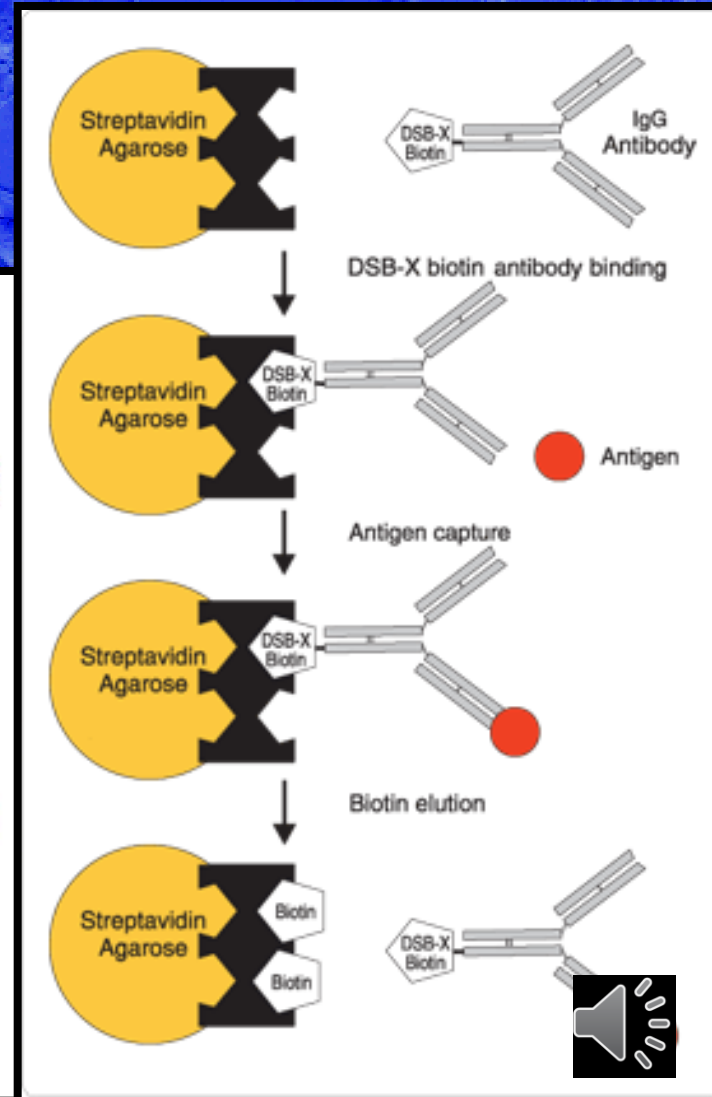
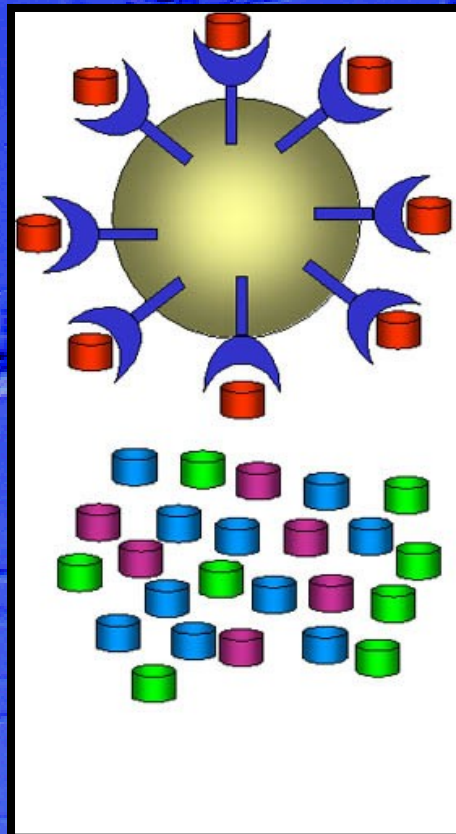
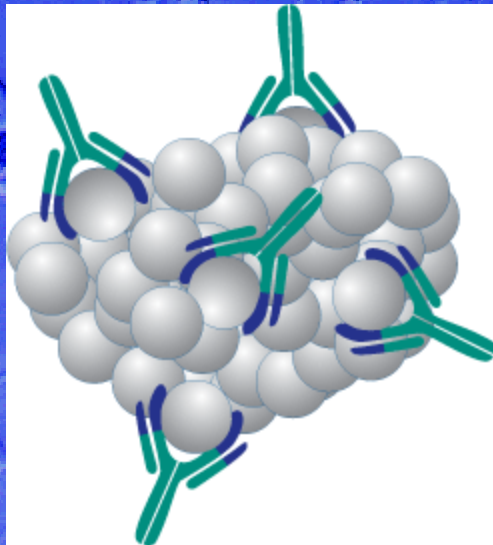
Diagram 2: Illustration of detection in Western Blots.



Afinitní chromatografie + imunoprecipitace

- purifikace a separace látek
- hledání partnerů v komplexech molekul
- studium struktury molekul a komplexů molekul

ELISA techniky, ...



Protilátky jsou komerčně dostupné...

