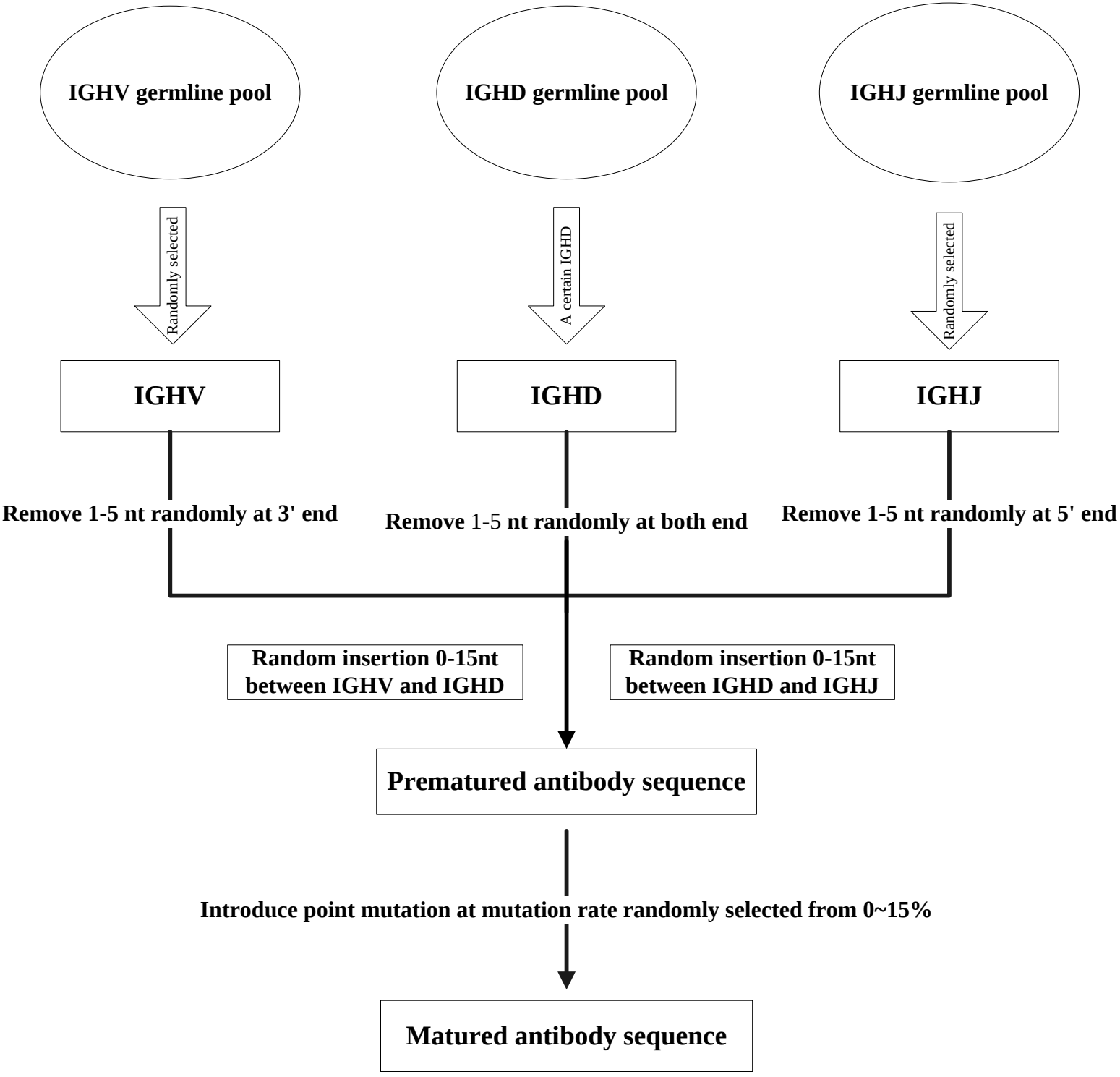
IGHV germline pool
IGHD germline pool
IGHJ germline pool
Randomly selected
A certain IGHD
Randomly selected
IGHV
IGHD
IGHJ
Remove 1-5 nt randomly at 3' end
Remove 1-5 nt randomly at both end
Remove 1-5 nt randomly at 5' end
Random insertion 0-15nt between IGHV and IGHD
Random insertion 0-15nt between IGHD and IGHJ
Prematured antibody sequence
Introduce point mutation at mutation rate randomly selected from 0~15%
Matured antibody sequence