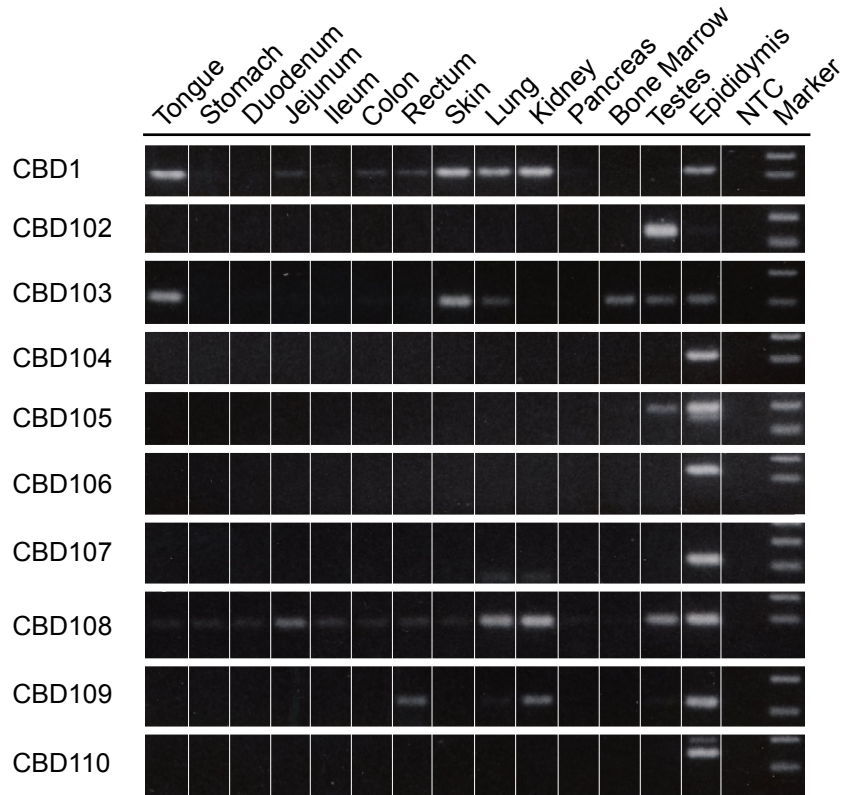
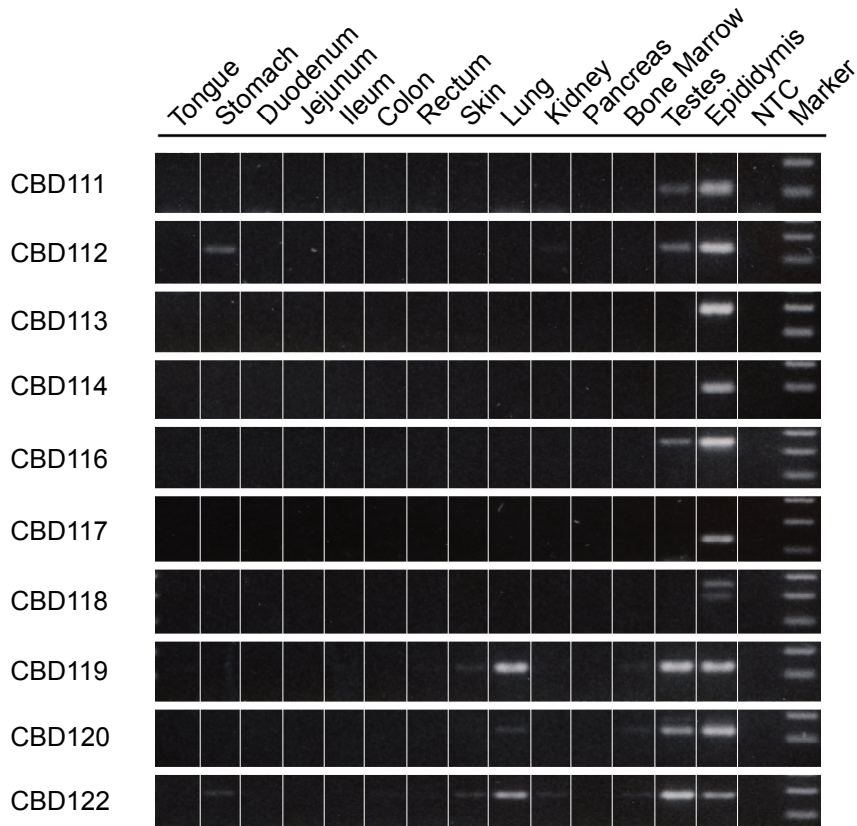


**SUPPLEMENTAL FIGURE 1.**

**A.**

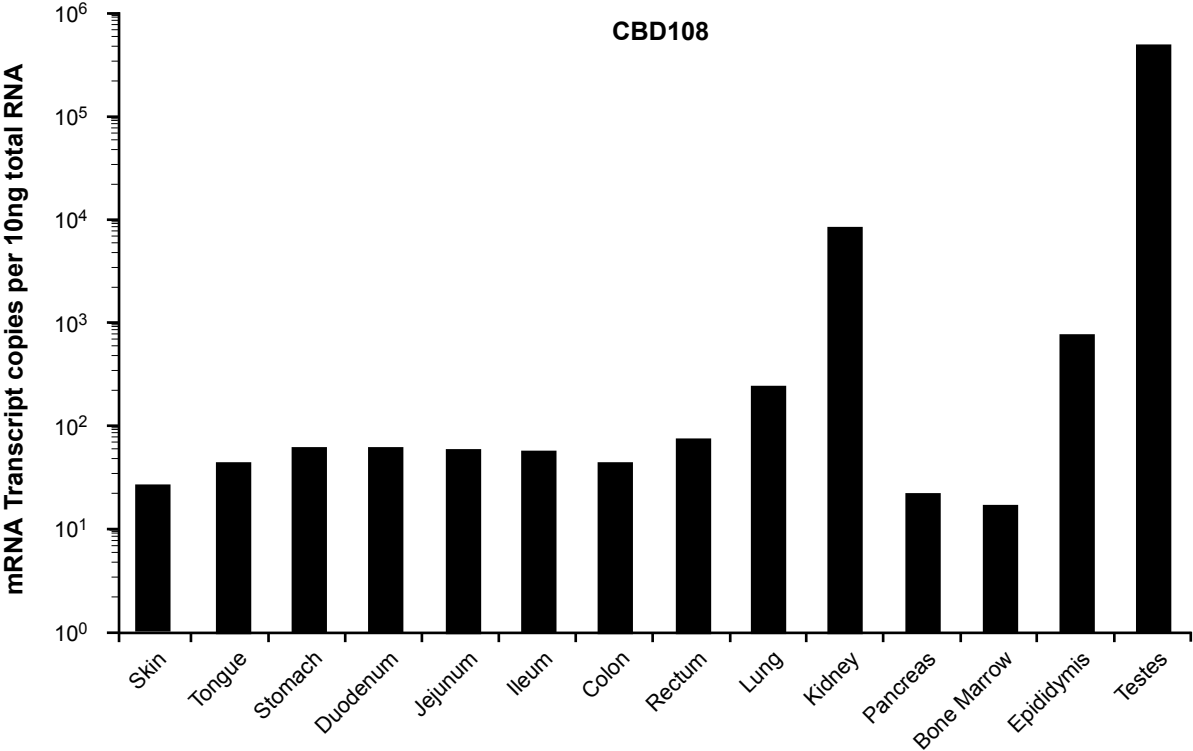


**B.**

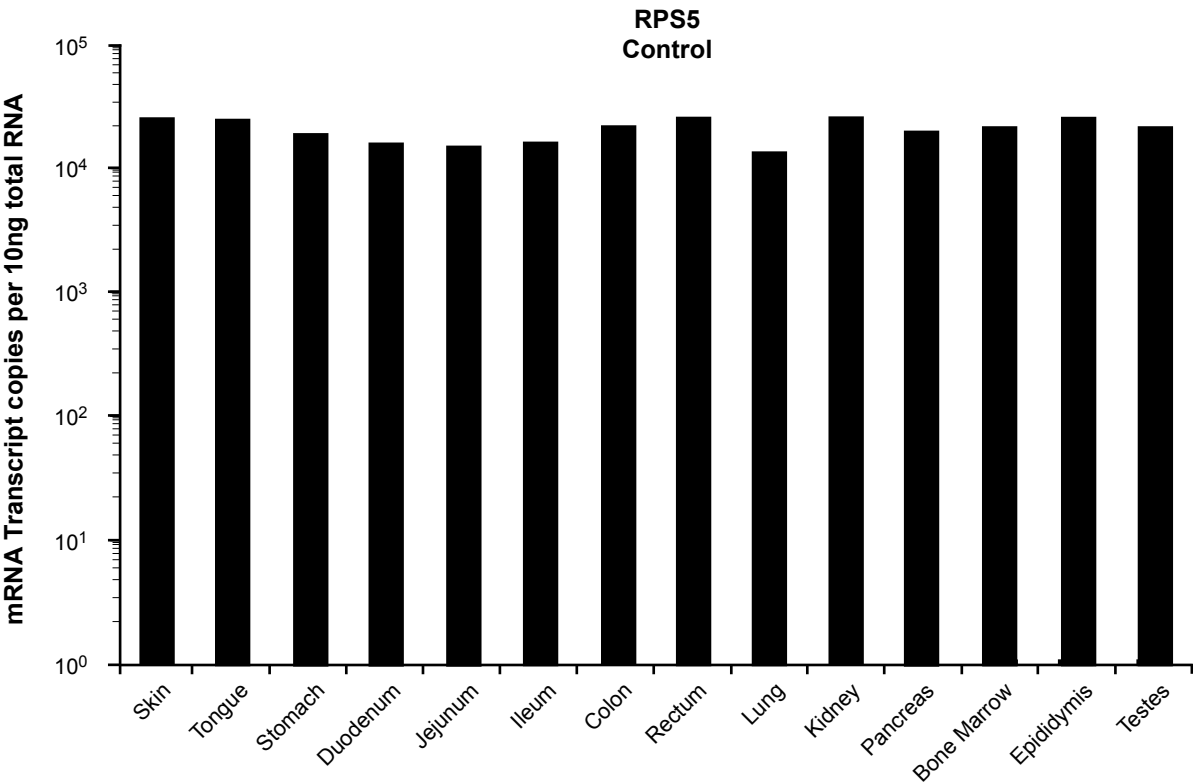


SUPPLEMENTAL FIGURE 2.

A.



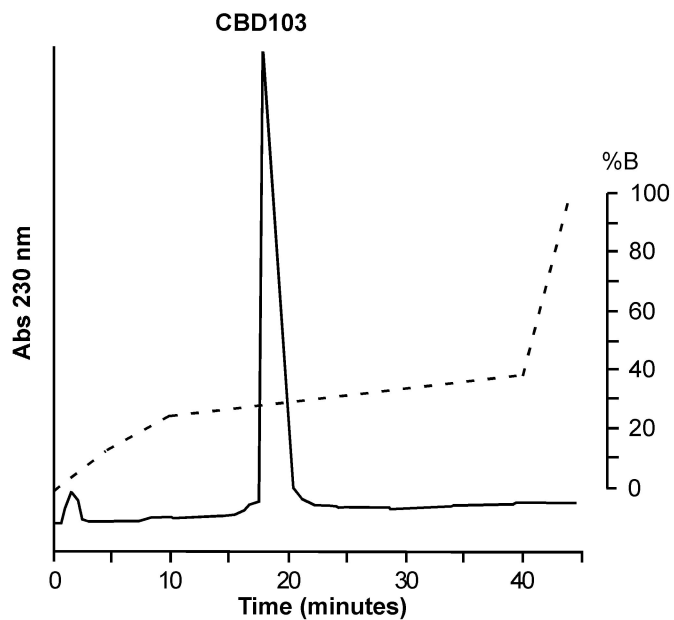
B.



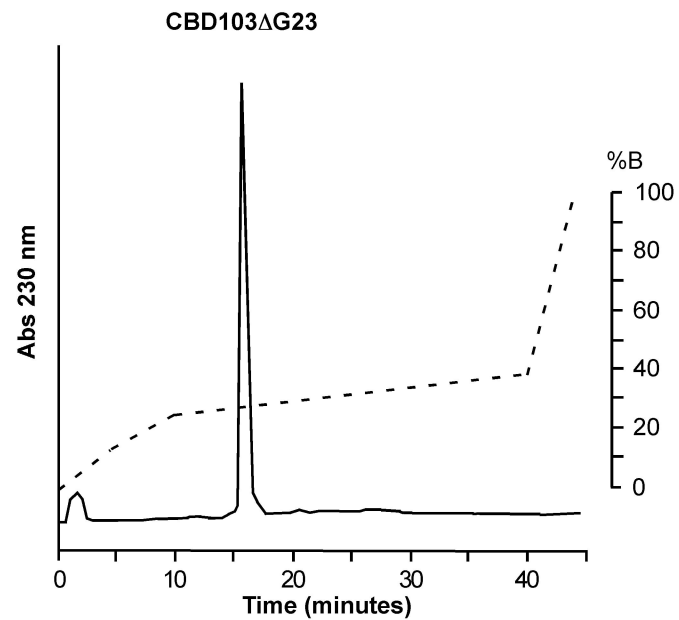


### SUPPLEMENTAL FIGURE 3.

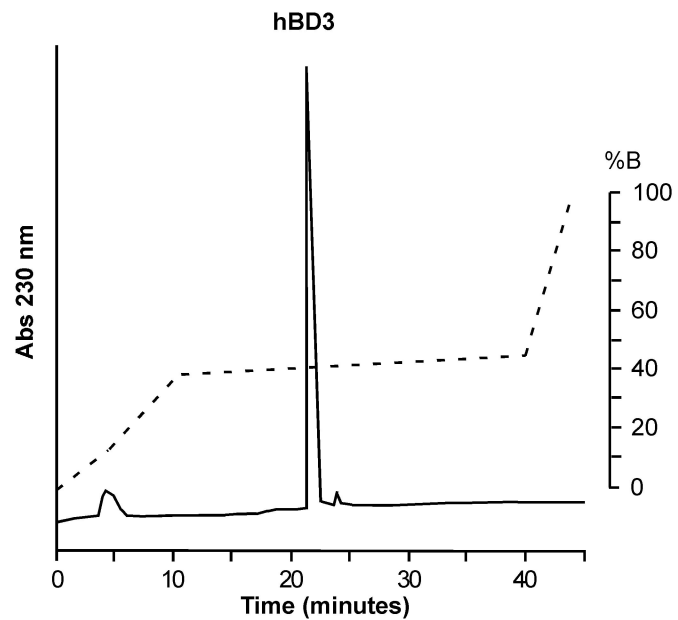
A.



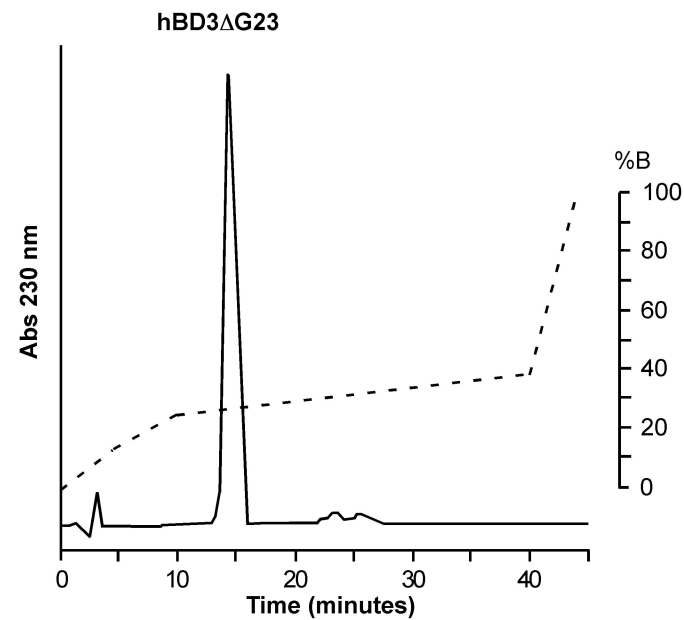
B.



C.

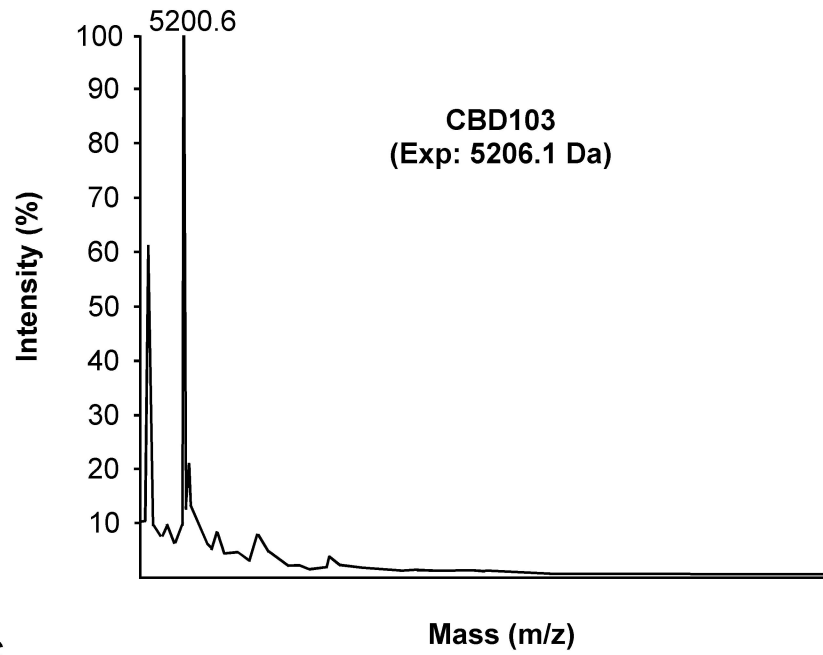


D.

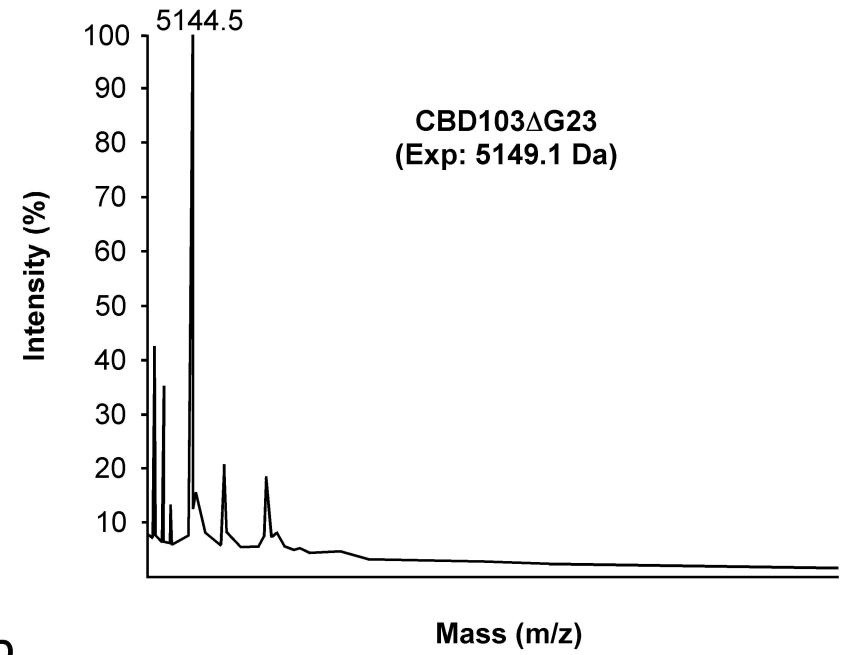


**SUPPLEMENTAL FIGURE 4.**

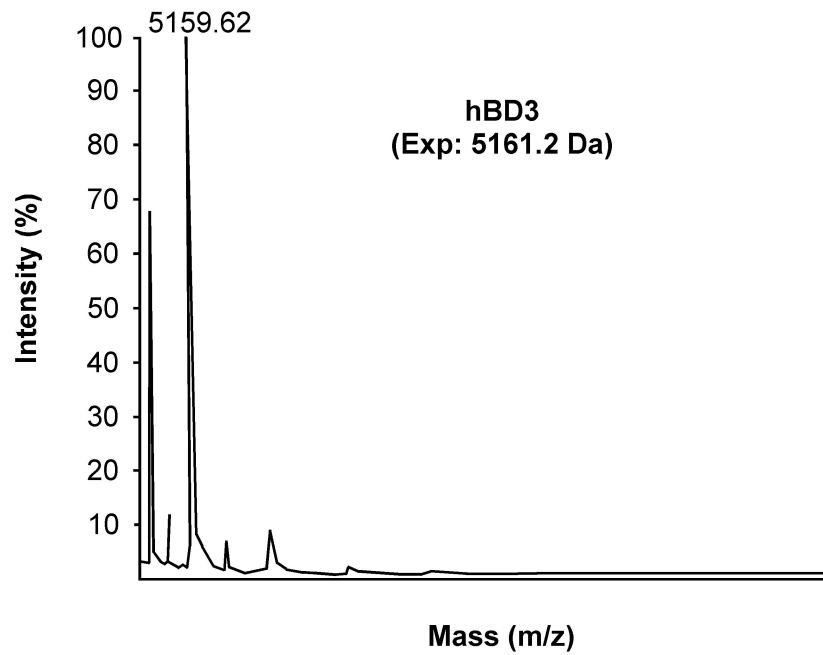
**A.**



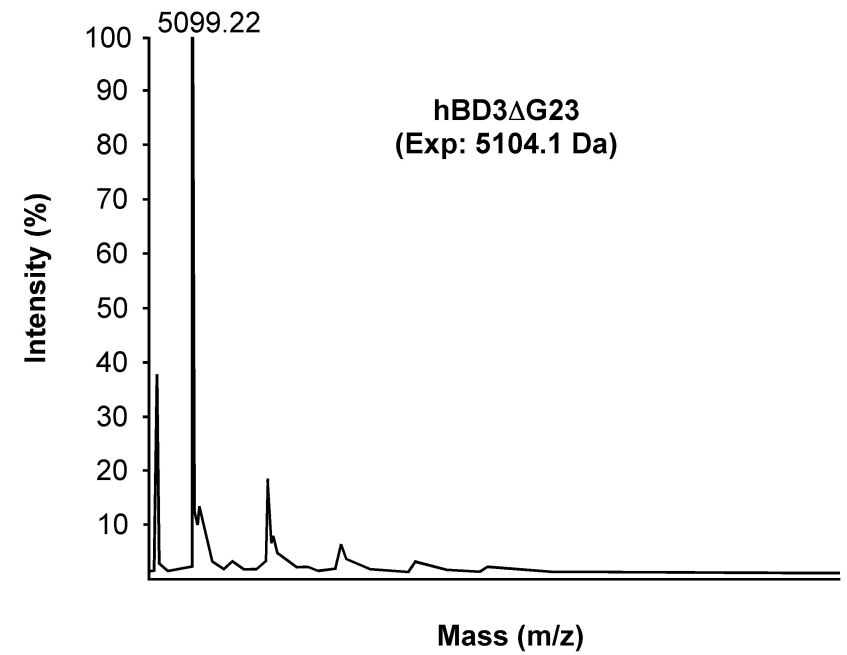
**B.**



**C.**



**D.**



**Supplemental Figure 1. (A-D) Comprehensive canine  $\beta$ -defensin expression screen.**

Agarose gel electrophoresis (1.5% w/v) analysis of canine  $\beta$ -defensin expression in various tissues, including gastrointestinal tract (tongue, stomach, duodenum, jejunum, ileum, colon, rectum), skin, lung, kidney, pancreas, bone marrow, testes and epididymis. Water used as non-template control (NTC). O'GeneRuler 100 base-pair DNA Ladder Plus (Fermentas, Glen Burnie, MD) used for marker.

**Supplemental Figure 2. Expression of CBD108 and RPS5.** qPCR analysis of absolute copy number of mRNA transcripts encoding CBD108 (A) and RPS5 (B) in RNA isolated from various tissues including gastrointestinal tract (tongue, stomach, duodenum, jejunum, ileum, colon, rectum), skin, lung, kidney, pancreas, bone marrow, testes and epididymis.

**Supplemental Figure 3. RP-HPLC analysis of purified recombinant Peptides.** RP-HPLC on an analytical C18 column of recombinant CBD103 (A), CBD103 $\Delta$ G23 (B), hBD3 (C) and hBD3 $\Delta$ G23 (D) using a gradient of acetonitrile and a flow rate of 1 ml/min. Dotted line indicates elution gradient of Buffer B (99.9% acetonitrile, 0.01% trifluoroacetic acid).

**Supplemental Figure 4. Mass Spectroscopy of Recombinant Peptides.** MALDI-TOF analysis of recombinant CBD103 WT (A), CBD103 $\Delta$ G23 (B), hBD3 WT (C) and hBD3 $\Delta$ G23 (D).