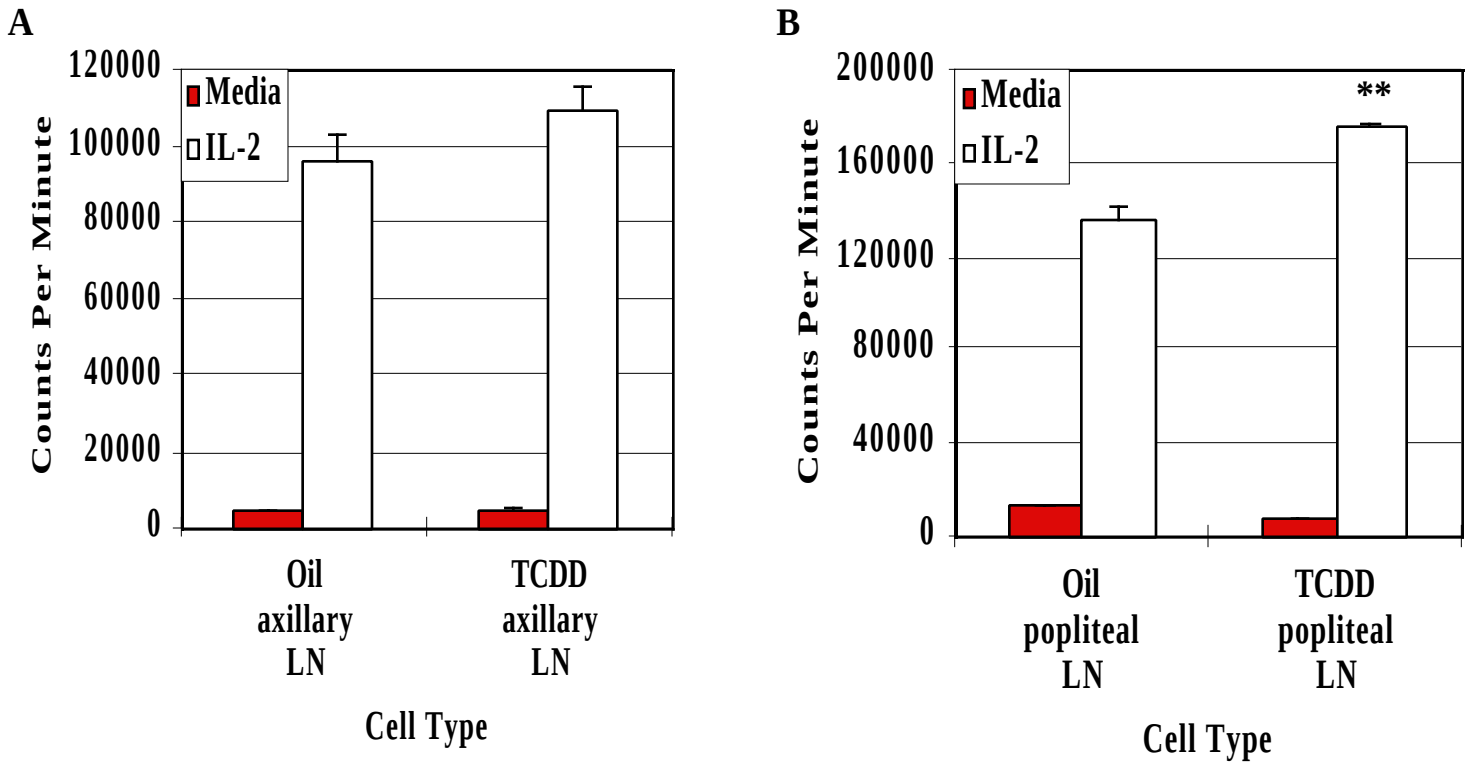

Figure 2. ***Effect of TCDD on the responsiveness of axillary and popliteal LN cells to stimulation with IL-2.*** Groups of 5 C57BL/6 mice were injected with TCDD oir the vehicle on day 0, and with anti-CD3 mAbs into both rear footpads on day 2. Three days following treatment with vehicle/TCDD and one day following footpad immunizations with anti-CD3 mAbs, axillary (A) and popliteal (B) lymph nodes were removed. Cells were cultured for 48 hours with medium alone or in the presence of IL-2, and cellular proliferation was measured with a ^{3}H-thymidine uptake assay. Data are shown as mean cpm±SEM of pooled triplicate cultures. No proliferative differences were observed between the resting LN cells from oil-treated and TCDD-treated animals (A). A small, but significant (**) (p=0.005), increase in proliferative rate was seen upon culturing activated lymph node cells from TCDD-treated animals with IL-2 (B).

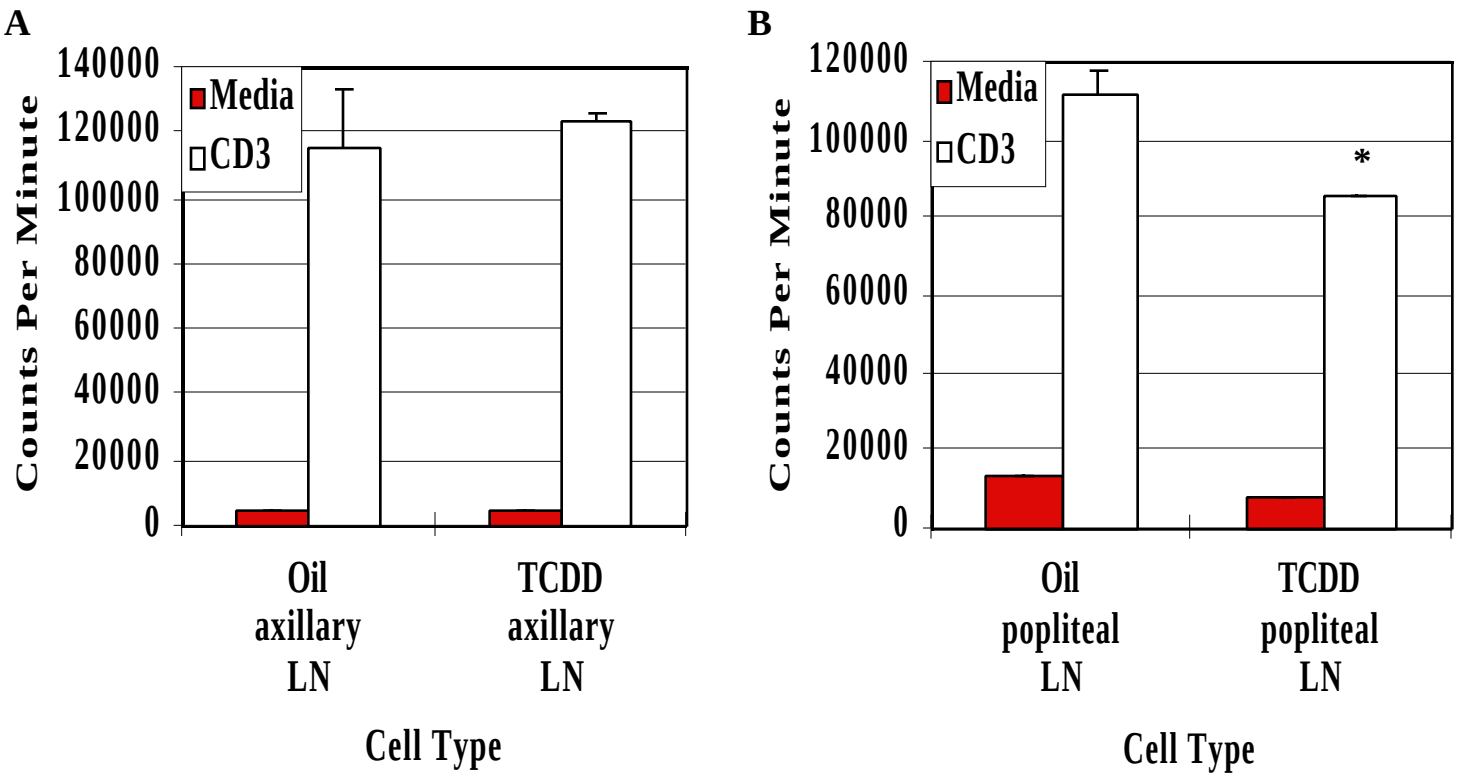

Figure 3. ***TCDD-treatment decreases the responsiveness of popliteal, but not axillary LN cells to stimulation with anti-CD3 mAbs.*** Groups of 5 C57BL/6 mice were injected with TCDD oir the vehicle on day 0, and with anti-CD3 mAbs into both rear footpads on day 2. Three days following treatment with vehicle/TCDD and one day following footpad immunizations with anti-CD3 mAbs, axillary (A) and popliteal (B) lymph nodes were removed. Cells were cultured with medium alone or in the presence of anti-CD3 mAbs for 48 hours, and cellular proliferation was measured with a ^{3}H-thymidine uptake assay. Data are shown as mean cpm±SEM of pooled triplicate cultures. Upon restimulation, an antigen-specific proliferative decrease was observed in the popliteal LN cells from TCDD-treated animals (*) (p=0.01) (B). No proliferative differences were observed in the resting lymph node cells (A).

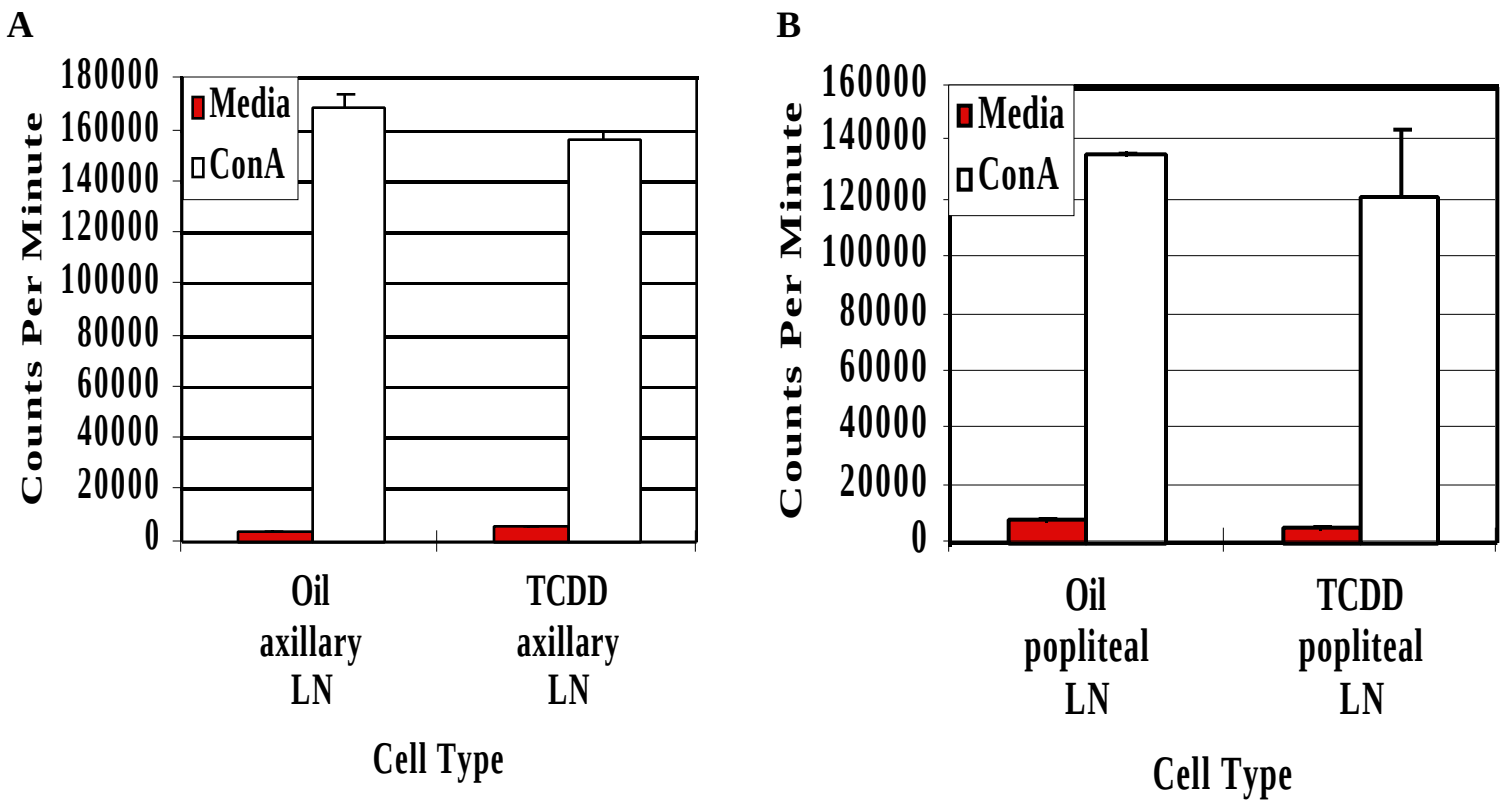

Figure 4. ***Naive and activated T cells from TCDD-treated mice respond normally when stimulated in culture with the T cell mitogen ConA.*** Groups of 5 C57BL/6 mice were injected with TCDD oir the vehicle on day 0, and with anti-CD3 mAbs into both rear footpads on day 2. Three days following treatment with vehicle/TCDD and one day following footpad immunizations with anti-CD3 mAbs, axillary (A) and popliteal (B) lymph nodes were removed. Cells were cultured with medium alone or in the presence of Concanavalin A for 48 hours, and cellular proliferation was measured with a ^{3}H-thymidine uptake assay. Data are shown as mean cpm±SEM of pooled triplicate cultures. While an antigen-specific proliferative decrease was observed in the popliteal lymph node cells from TCDD-treated animals (Figure 3B), no proliferative decrease was observed upon culture with a non-specific T cell mitogen (B). As in previous studies, no proliferative differences were observed in the resting lymph node cell population.

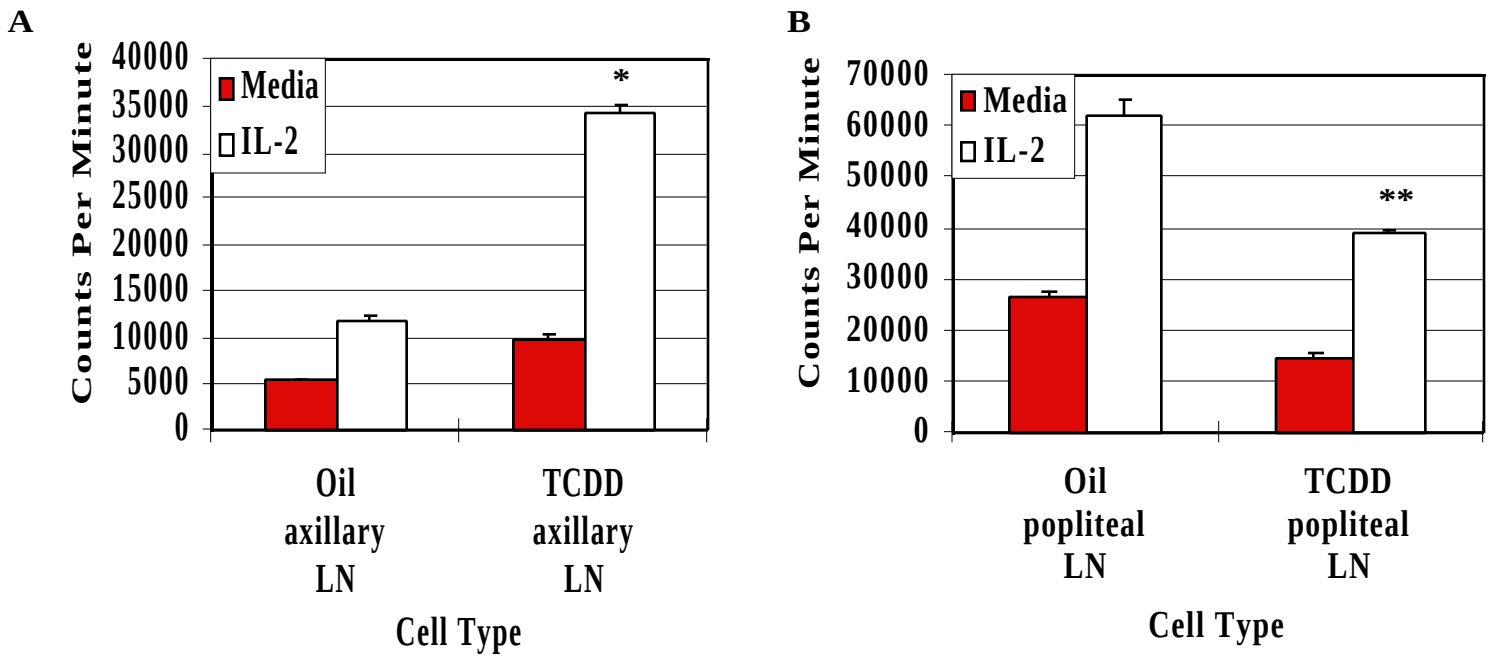

Figure 5. ***Responsiveness of axillary and popliteal LN cells to stimulation with IL-2 <u>in vitro</u> one week after TCDD treatment.*** Groups of 5 C57BL/6 mice were injected with TCDD oir the vehicle on day 0, and on the same day injected with anti-CD3 mAbs into both rear footpads. One week after vehicle/TCDD treatment and rear footpad immunization with anti-CD3 mAbs, axillary (A) and popliteal (B) lymph nodes were removed. Cells were cultured with medium alone or in the presence of IL-2 for 24 hours, and cellular proliferation was measured with a ^{3}H-thymidine uptake assay. Data are shown as mean cpm±SEM of pooled triplicate cultures. The resting lymph node cells from TCDD-treated animals showed an increased proliferative ability (*) (p=0.0005) over the control in response to culture with IL-2 (A). Activated lymph node cells from TCDD-treated animals, however, showed reduced proliferative ability (**) (p=0.005), compared to activated lymph node cells from oil-treated animals, when cultured with IL-2 (B).

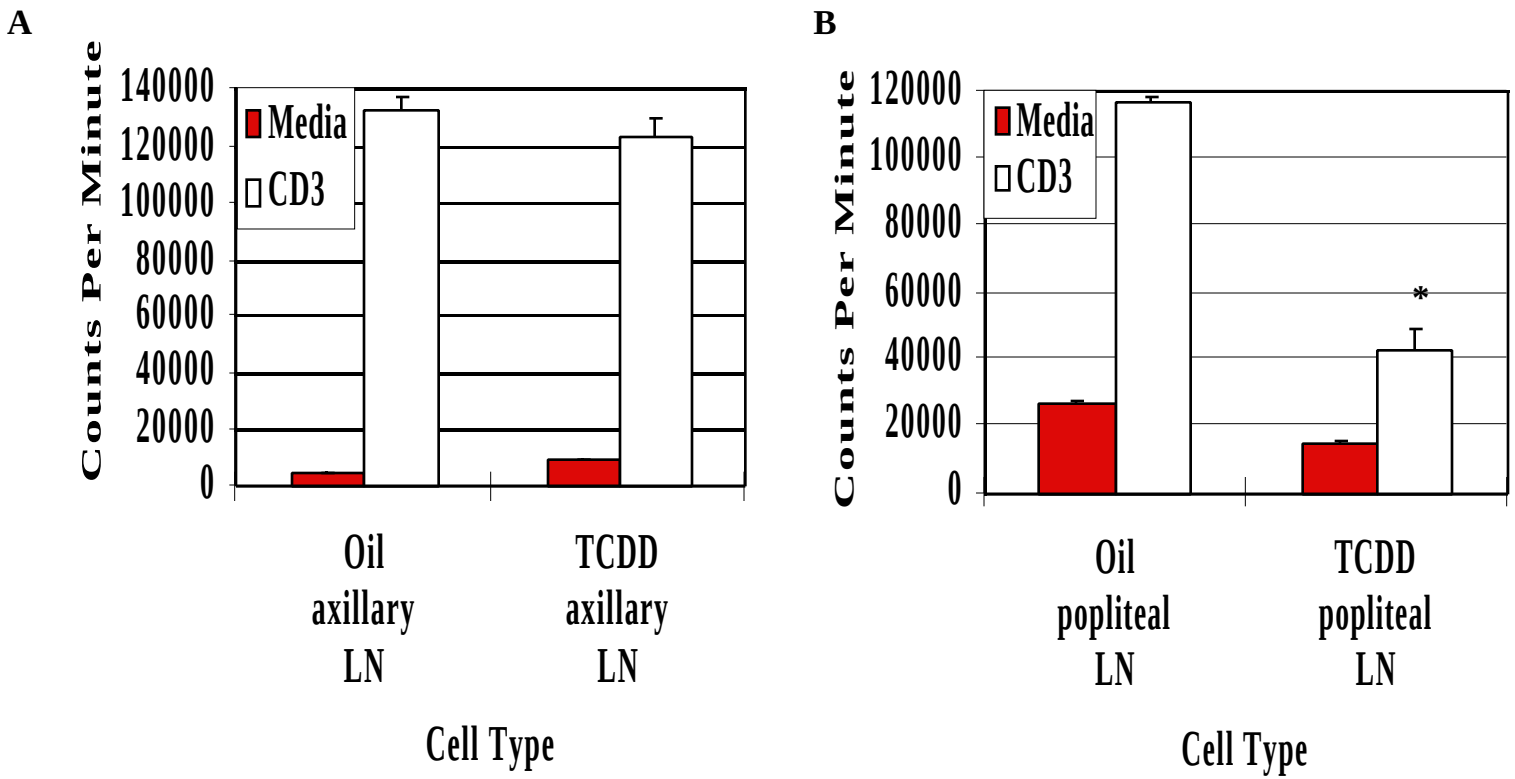

Figure 6. ***TCDD decreases the responsiveness of activated, but not naive, T cells to stimulation with anti-CD3 mAbs one week after treatment.*** Groups of 5 C57BL/6 mice were injected with TCDD oir the vehicle on day 0, and on the same day injected with anti-CD3 mAbs into both rear footpads. One week after vehicle/TCDD treatment and rear footpad immunization with anti-CD3 mAbs, axillary (A) and popliteal (B) lymph nodes were removed. Cells were cultured for 24 hours with medium alone or in the presence of anti-CD3 mAbs, and cellular proliferation was measured with a ^{3}H-thymidine uptake assay. Data are shown as mean cpm±SEM of pooled triplicate cultures. No proliferative differences were observed in the resting lymph node cell population (A). In the activated cell population from TCDD-treated animals, however, an antigen-specific proliferative decrease (*) (p=0.0025) was clearly seen (B).

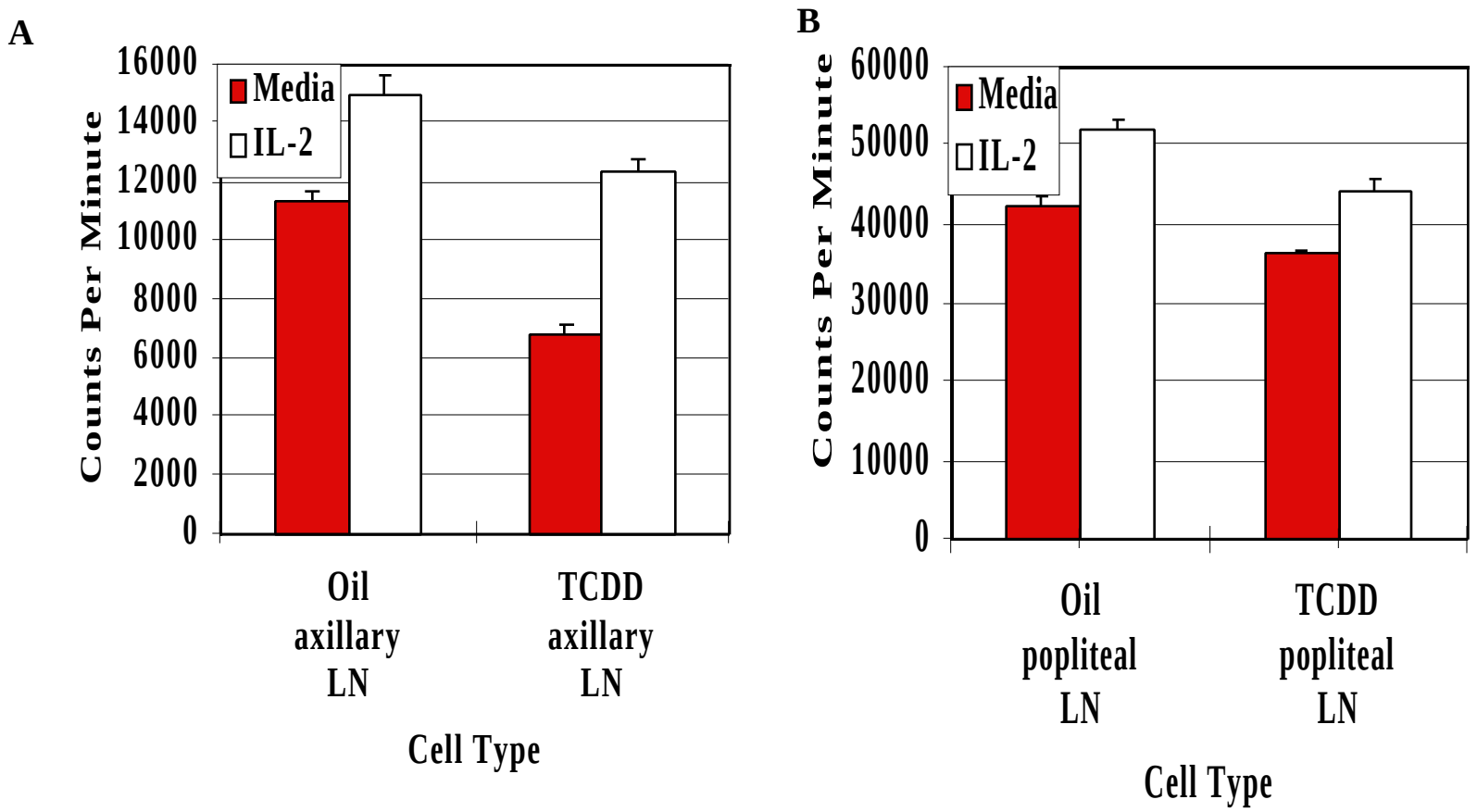

Figure 7. ***Responsiveness of axillary and popliteal LN cells to IL-2 stimulation two weeks after TCDD treatment.*** Groups of 5 C57BL/6 mice were injected with TCDD oir the vehicle on day 0, and on the same day injected with anti-CD3 mAbs into both rear footpads. Two weeks after vehicle/TCDD treatment and rear footpad immunizations with anti-CD3 mAbs, axillary (A) and popliteal (B) lymph nodes were removed. Cells were cultured for 24 hours with medium alone or in the presence of IL-2, and cellular proliferation was measured with a ^{3}H-thymidine uptake assay. Data are shown as mean cpm±SEM of pooled triplicate cultures. At this timepoint, the responsiveness of both the resting (A) and activated (B) lymphocytes from TCDD-treated animals remained similar to the proliferative levels of resting (A) and activated (B) lymphocytes from oil-treated mice.

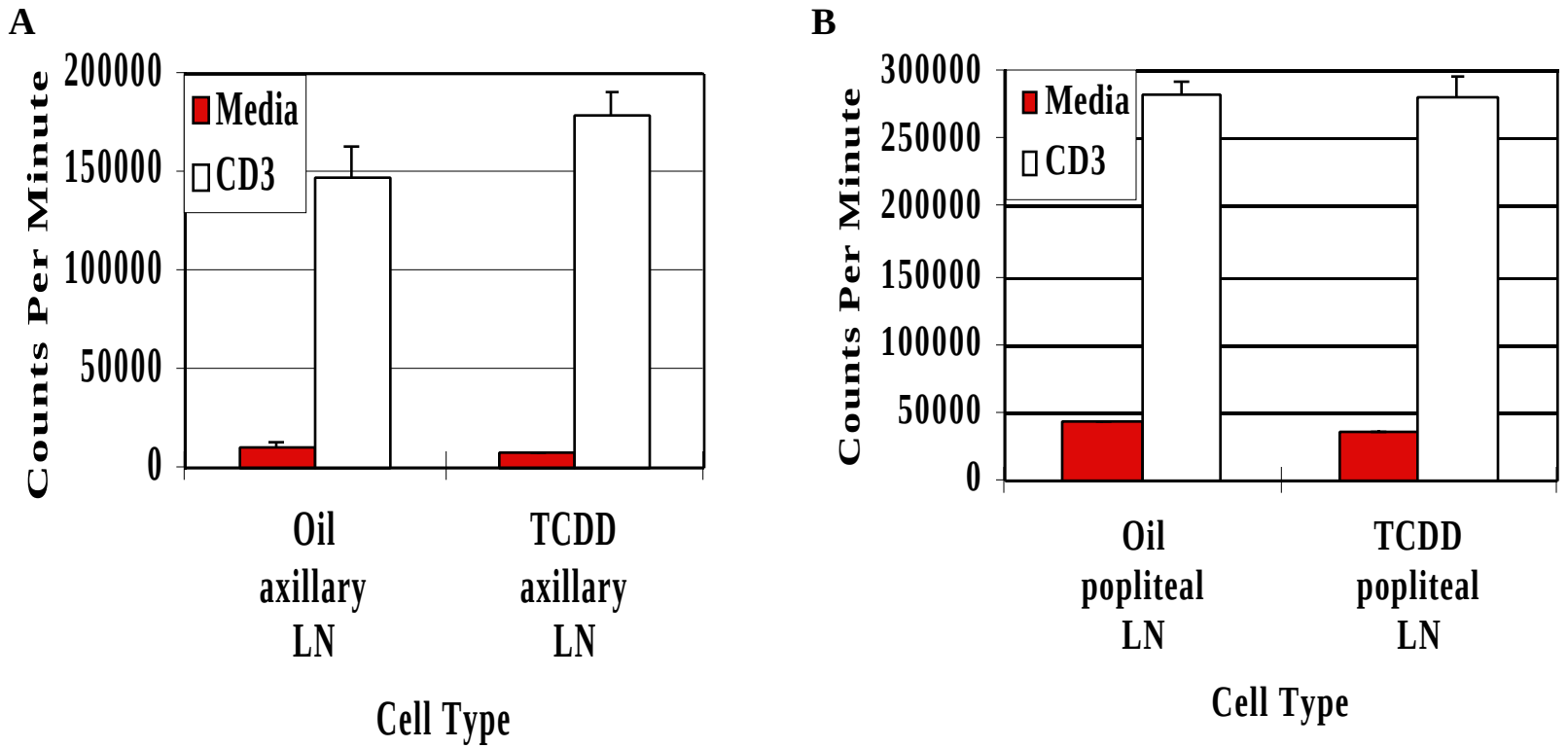

Figure 8. ***Responsiveness of axillary and popliteal LN cells to anti-CD3 stimulation two weeks after TCDD treatment.*** Groups of 5 C57BL/6 mice were injected with TCDD oir the vehicle on day 0, and on the same day injected with anti-CD3 mAbs into both rear footpads. Two weeks after vehicle/TCDD treatment and rear footpad immunizations with anti-CD3 mAbs, axillary (A) and popliteal (B) lymph nodes were removed. Cells were cultured for 24 hours with medium alone or in the presence of anti-CD3 mAbs, and cellular proliferation was measured with a ^{3}H-thymidine uptake assay. Data are shown as mean cpm±SEM of pooled triplicate cultures. At this timepoint, the responsiveness of both the resting (A) and activated (B) lymphocytes from TCDD-treated animals were similar to those of resting (A) and activated (B) lymphocytes from oil-treated animals.

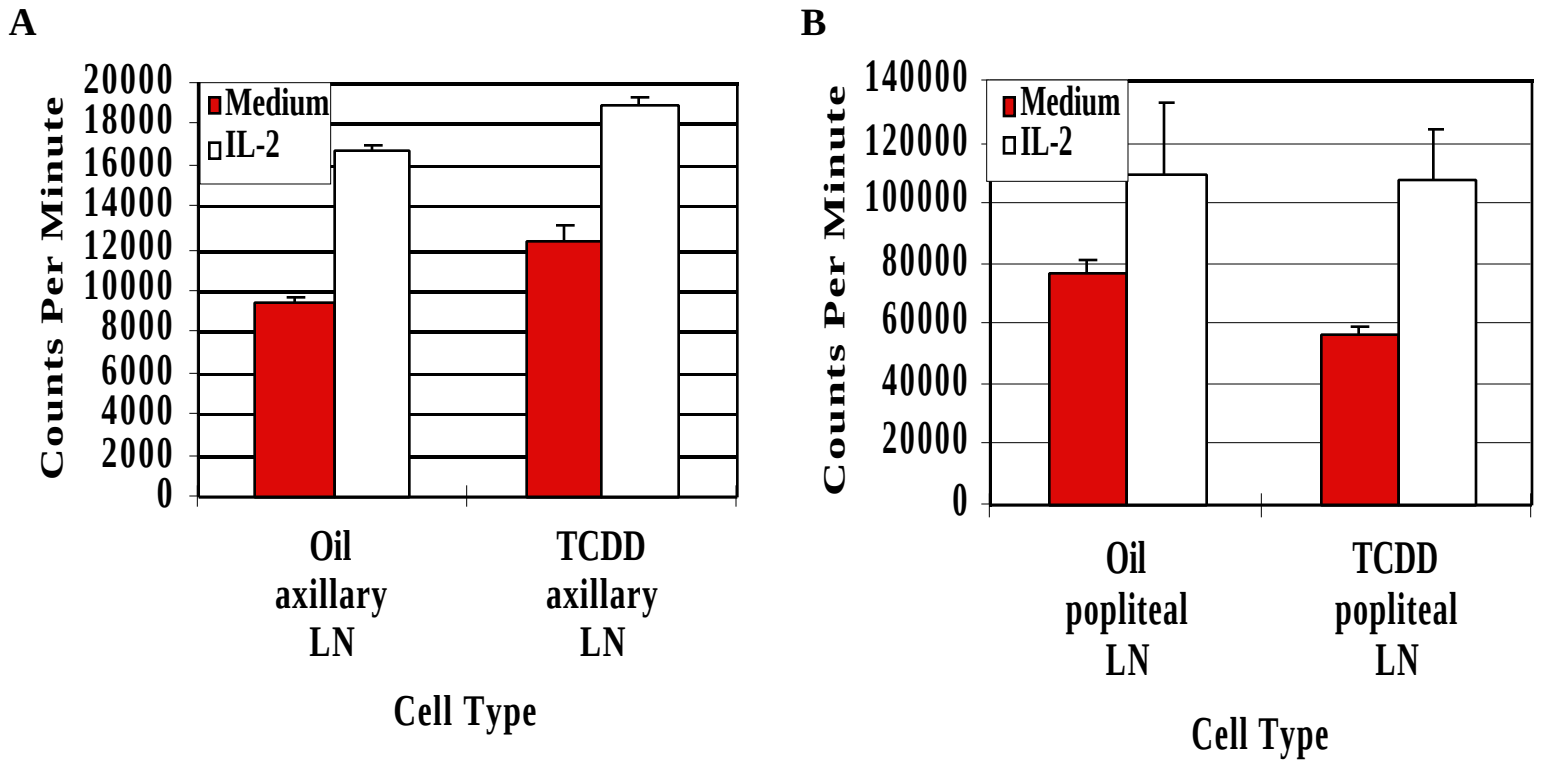

Figure 9. ***Responsiveness of axillary and popliteal LN cells to IL-2 stimulation three weeks after TCDD treatment.*** Groups of 5 C57BL/6 mice were injected with TCDD oir the vehicle on day 0, and on the same day injected with anti-CD3 mAbs into both rear footpads. Three weeks after vehicle/TCDD treatment and rear footpad immunizations with anti-CD3 mAbs, axillary (A) and popliteal (B) lymph nodes were removed. Cells were cultured for 24 hours with medium alone or in the presence of IL-2, and cellular proliferation was measured with a ^{3}H-thymidine uptake assay. Data are shown as mean cpm±SEM of pooled triplicate cultures. At this timepoint, the responsiveness of both the resting (A) and activated (B) lymphocytes from TCDD-treated animals remained similar to the proliferative responses of resting (A) and activated (B) cells from oil-treated mice.

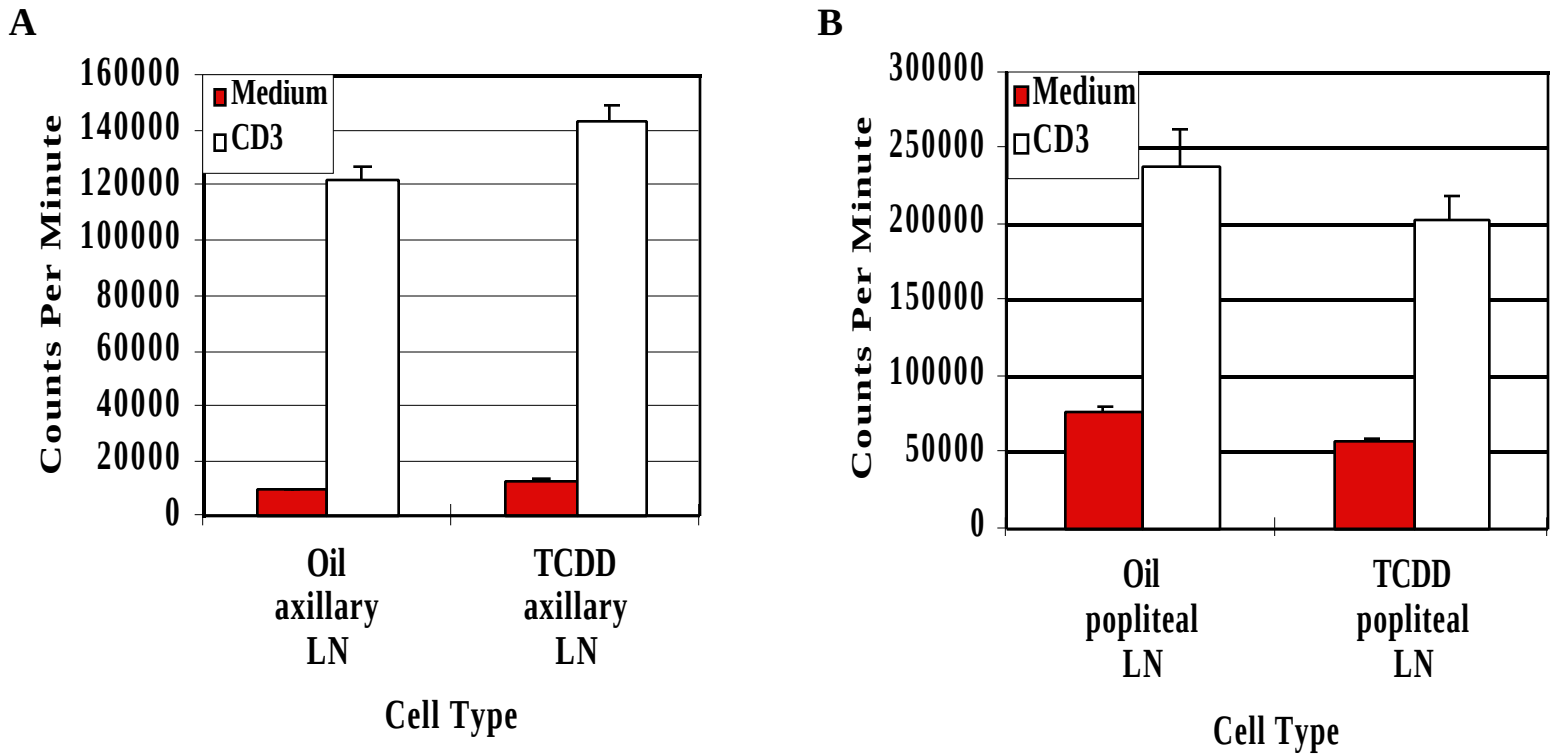

Figure 10. ***Responsiveness of axillary and popliteal LN cells to anti-CD3 stimulation three weeks after TCDD treatment.*** Groups of 5 C57BL/6 mice were injected with TCDD oir the vehicle on day 0, and on the same day injected with anti-CD3 mAbs into both rear footpads. Three weeks after vehicle/TCDD treatment and rear footpad immunizations with anti-CD3 mAbs, axillary (A) and popliteal (B) lymph nodes were removed. Cells were cultured for 24 hours with medium alone or in the presence of anti-CD3 mAbs, and cellular proliferation was measured with a ^{3}H-thymidine uptake assay. Data are shown as mean cpm±SEM of pooled triplicate cultures. At this timepoint, the responsiveness of both the resting (A) and activated (B) lymphocytes from TCDD-treated animals remained similar to the proliferative responses of resting (A) and activated (B) cells from oil-treated mice.

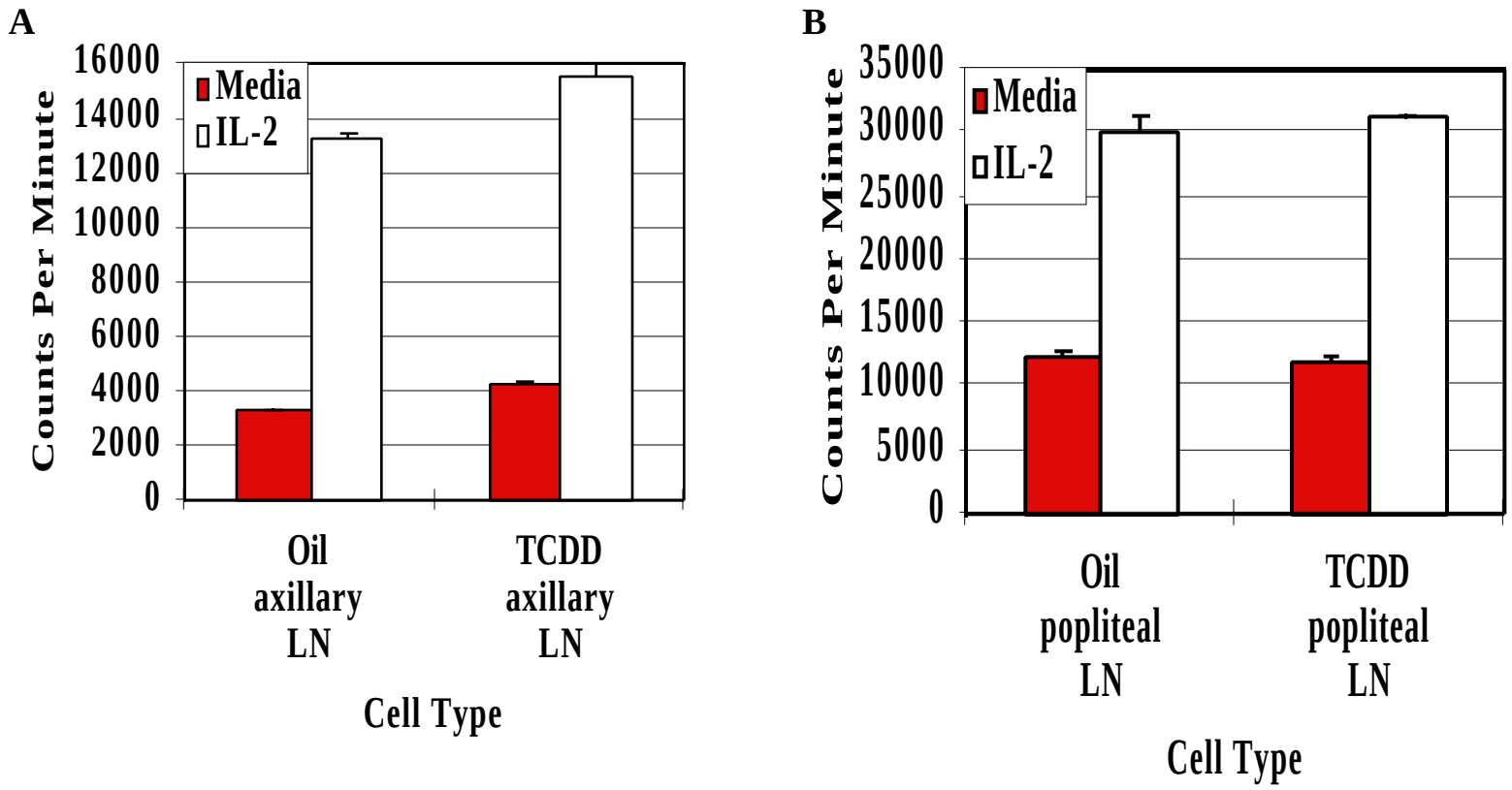

Figure 11. ***TCDD does not alter the responsiveness of resting popliteal LN T cells to stimulation with IL-2.*** Groups of 5 C57BL/6 mice were injected with TCDD oir the vehicle on day 0. One week after vehicle/TCDD treatment, axillary (A) and popliteal (B) lymph nodes were removed. Cells were cultured for 24 hours with medium alone or in the presence of IL-2, and cellular proliferation was measured with a ^{3}H-thymidine uptake assay. Data are shown as mean cpm±SEM of pooled triplicate cultures. Axillary and popliteal lymph node cells respond similarly to culture with IL-2.

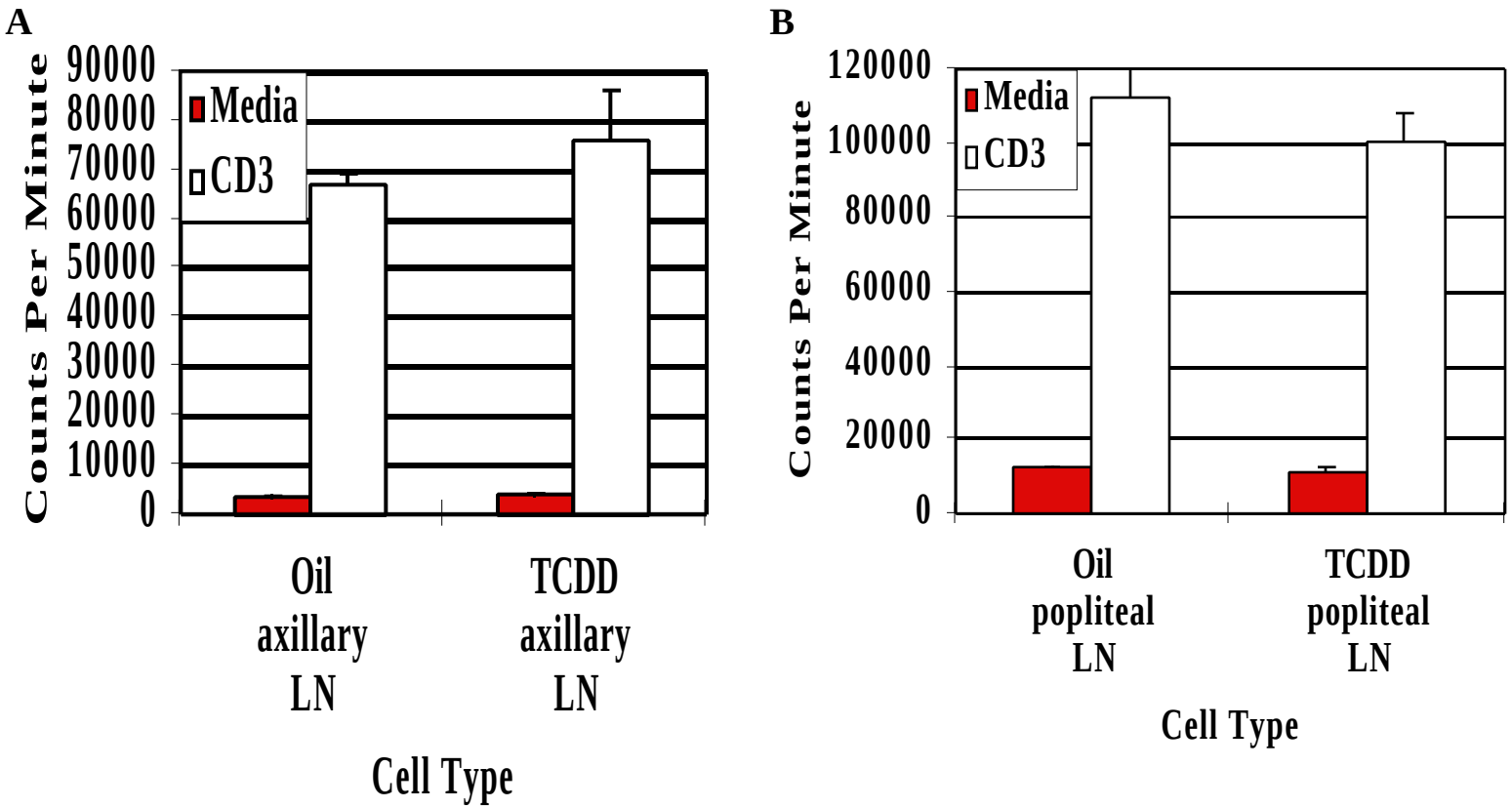

Figure 12. ***TCDD does not alter the responsiveness of resting popliteal LN T cells to stimulation with anti-CD3 mAbs.*** Groups of 5 C57BL/6 mice were injected with TCDD oir the vehicle on day 0. One week after vehicle/TCDD treatment, axillary (A) and popliteal (B) lymph nodes were removed. Cells were cultured for 24 hours with medium alone or in the presence of anti-CD3 mAbs, and cellular proliferation was measured with a ^{3}H-thymidine uptake assay. Data are shown as mean cpm±SEM of pooled triplicate cultures. Axillary and popliteal lymph node cells respond similarly to culture with anti-CD3 mAbs.

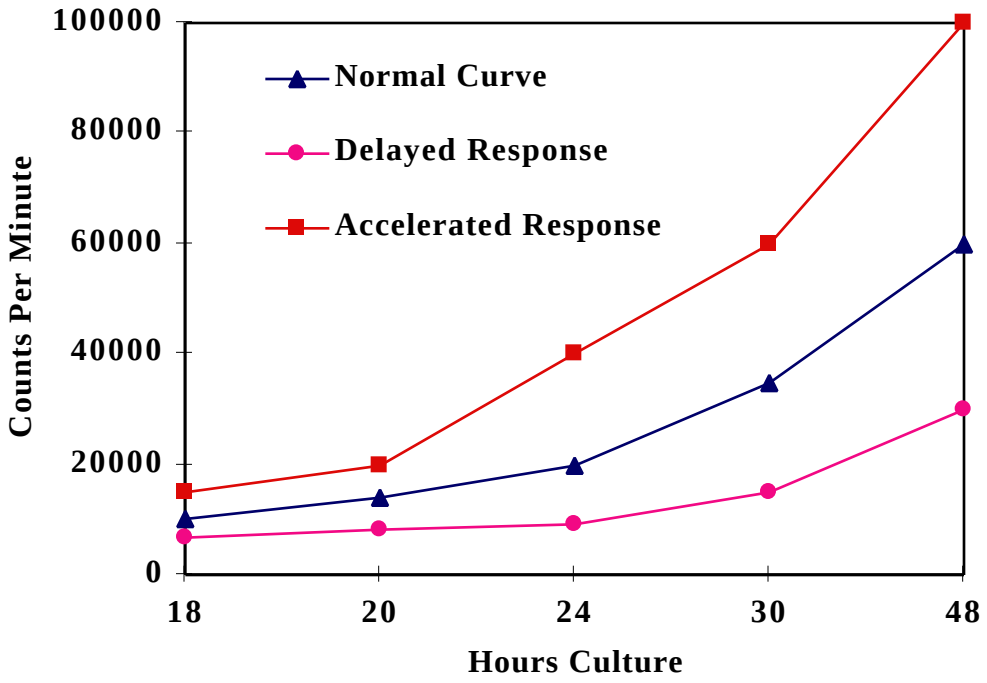

Figure 13. ***A sample kinetics curve to illustrate accelerated and delayed immune responses.*** An accelerated immune response shifts the curve up and to the left of the normal control, while a delayed immune response shifts the curve down and to the right of the normal control.

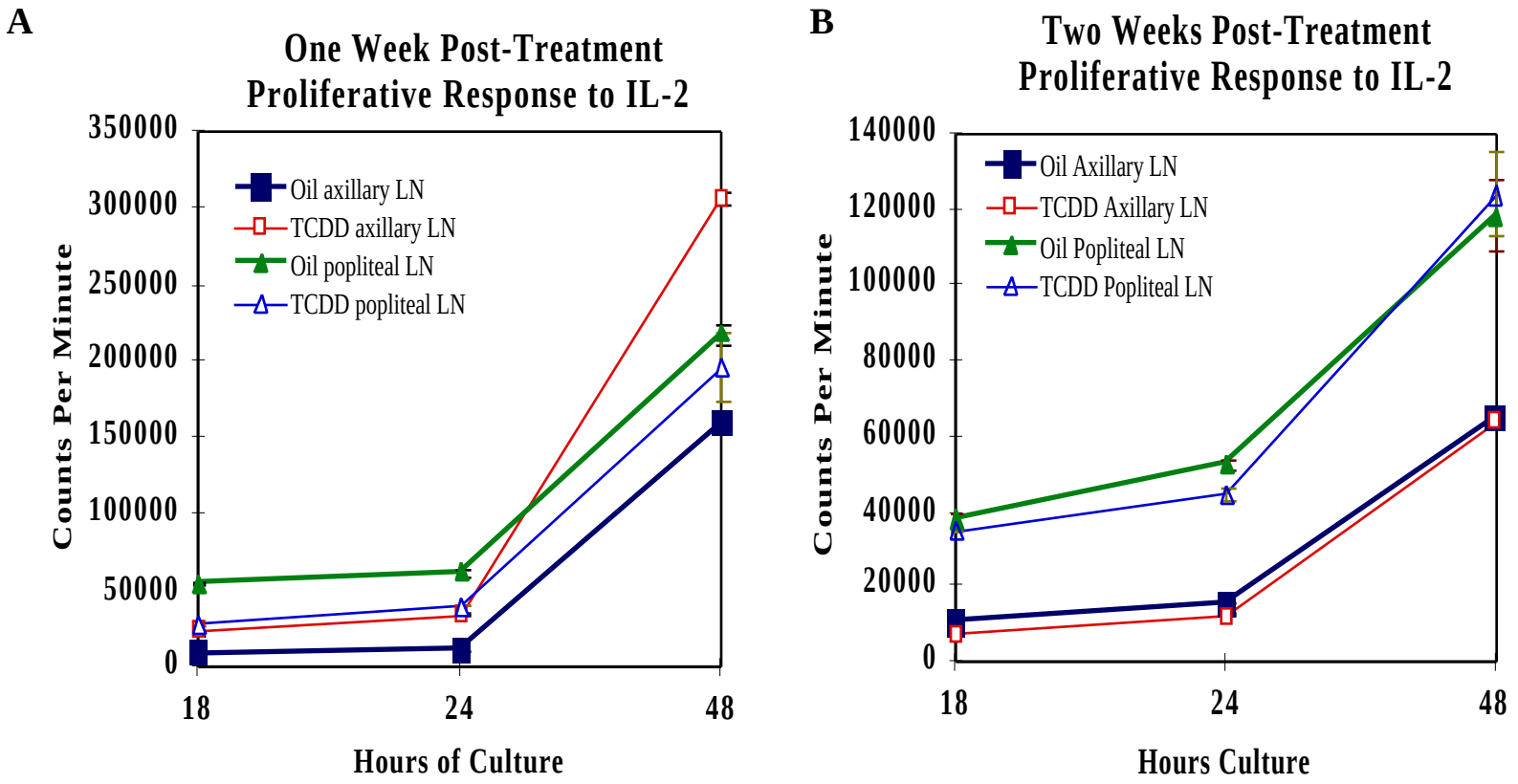

Figure 14. ***Kinetics of the lymphocyte response to IL-2, one and two weeks following vehicle/TCDD treatment and footpad immunizations with anti-CD3 mAbs.*** One (A) and two (B) weeks after vehicle/TCDD treatment and rear footpad immunizations with anti-CD3 mAbs, axillary and popliteal lymph nodes were removed. Cells were cultured for 18, 24, and 48 hours in the presence of IL-2. Proliferative rates were assessed by a ^{3}H-thymidine uptake assay. Data are shown as cpm±SEM; n=3. The SEM was often too small to extend beyond the identifying symbol.

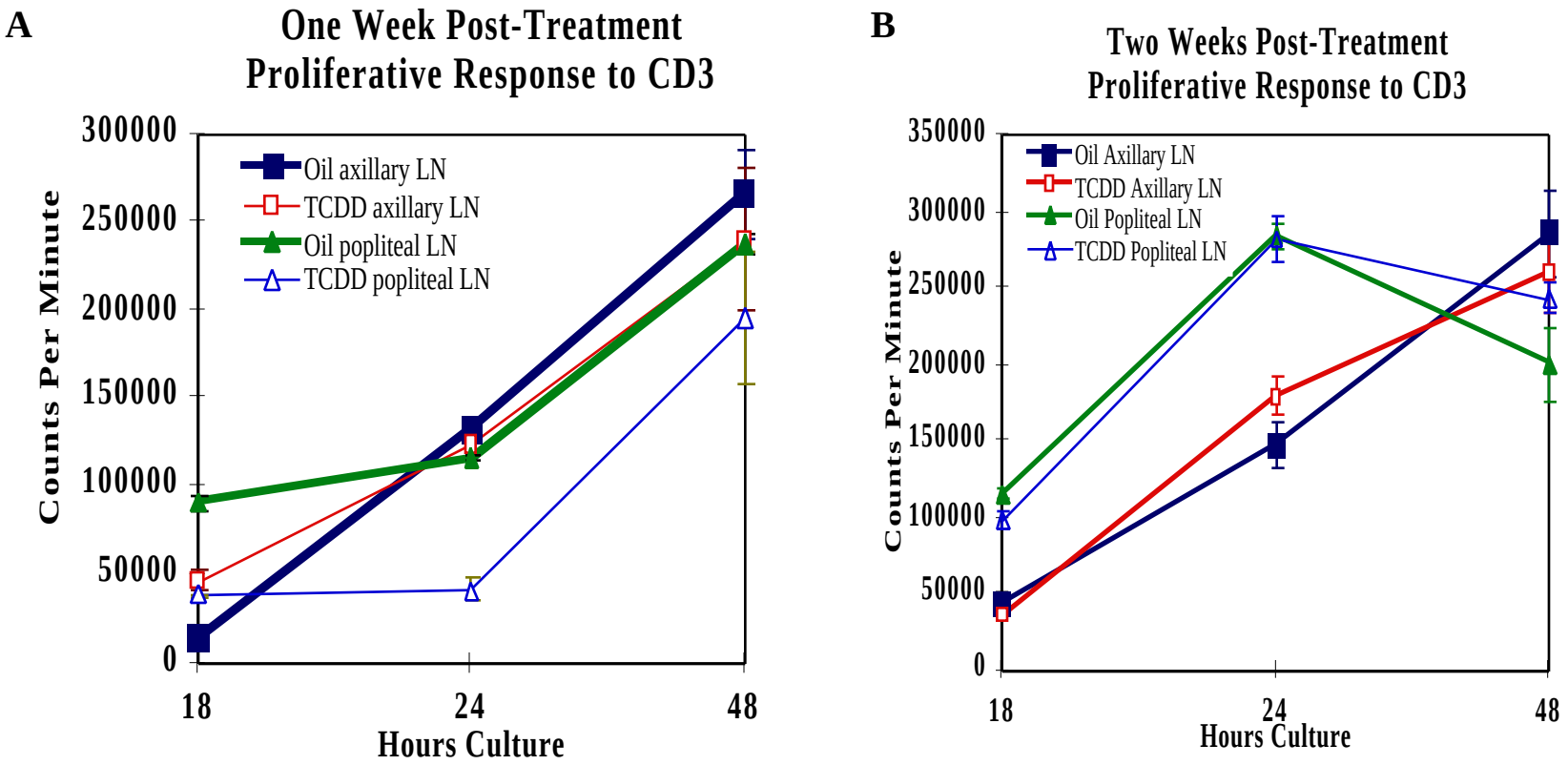

Figure 15. ***Kinetics of the lymphocyte response to anti-CD3 mAbs, one and two weeks following vehicle/TCDD treatment and footpad immunizations with anti-CD3 mAbs.*** One (A) and two (B) weeks after vehicle/TCDD treatment and rear footpad immunizations with anti-CD3 mAbs, axillary and popliteal lymph nodes were removed. Cells were cultured for 18, 24, and 48 hours in the presence of anti-CD3 mAbs. Proliferative rates were assessed by a ^{3}H-thymidine uptake assay. Data are shown as cpm±SEM; n=3. In A, the SEM was often too small to extend beyond the identifying symbol.