dist_p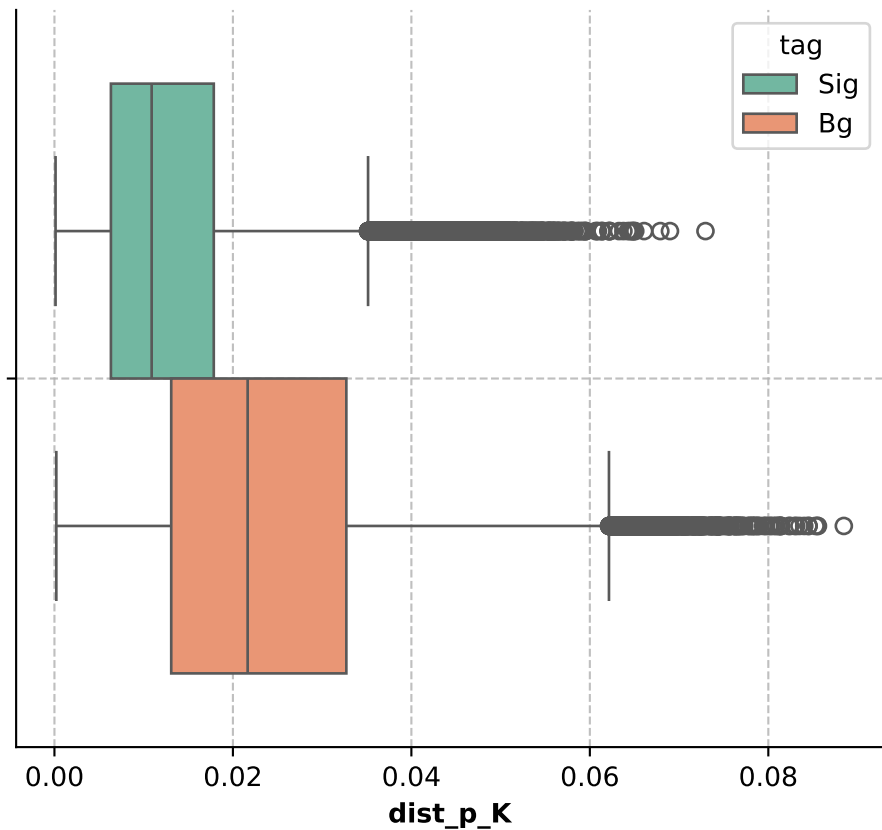_K Distribution   **dist_p_K Distribution**