dist_p_K Distribution

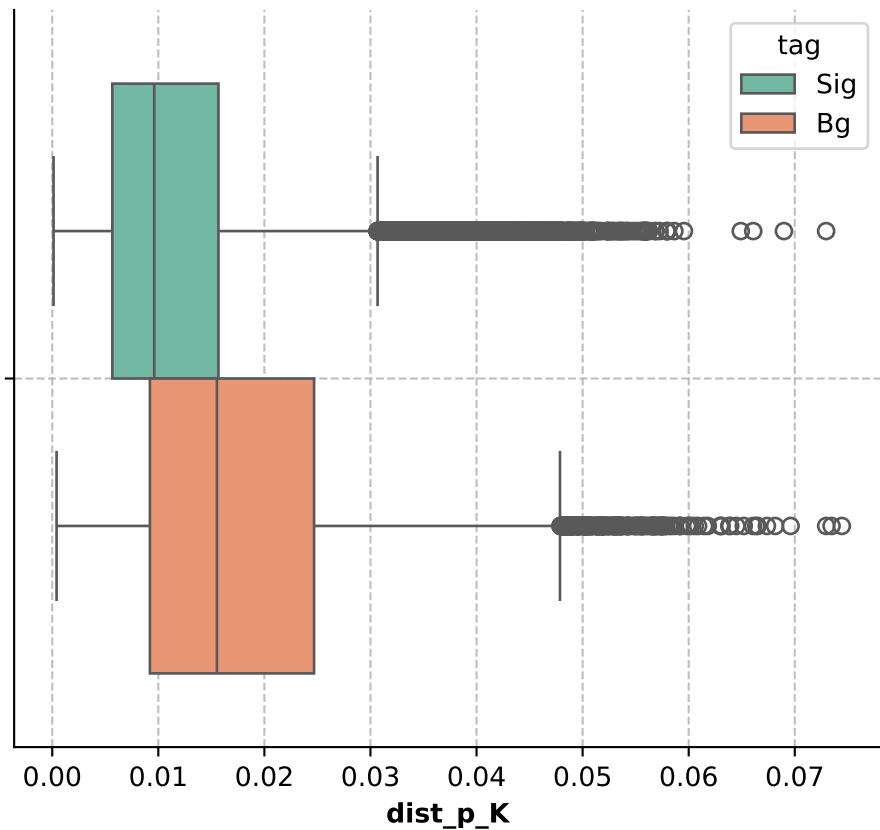**dist_p_K Distribution**