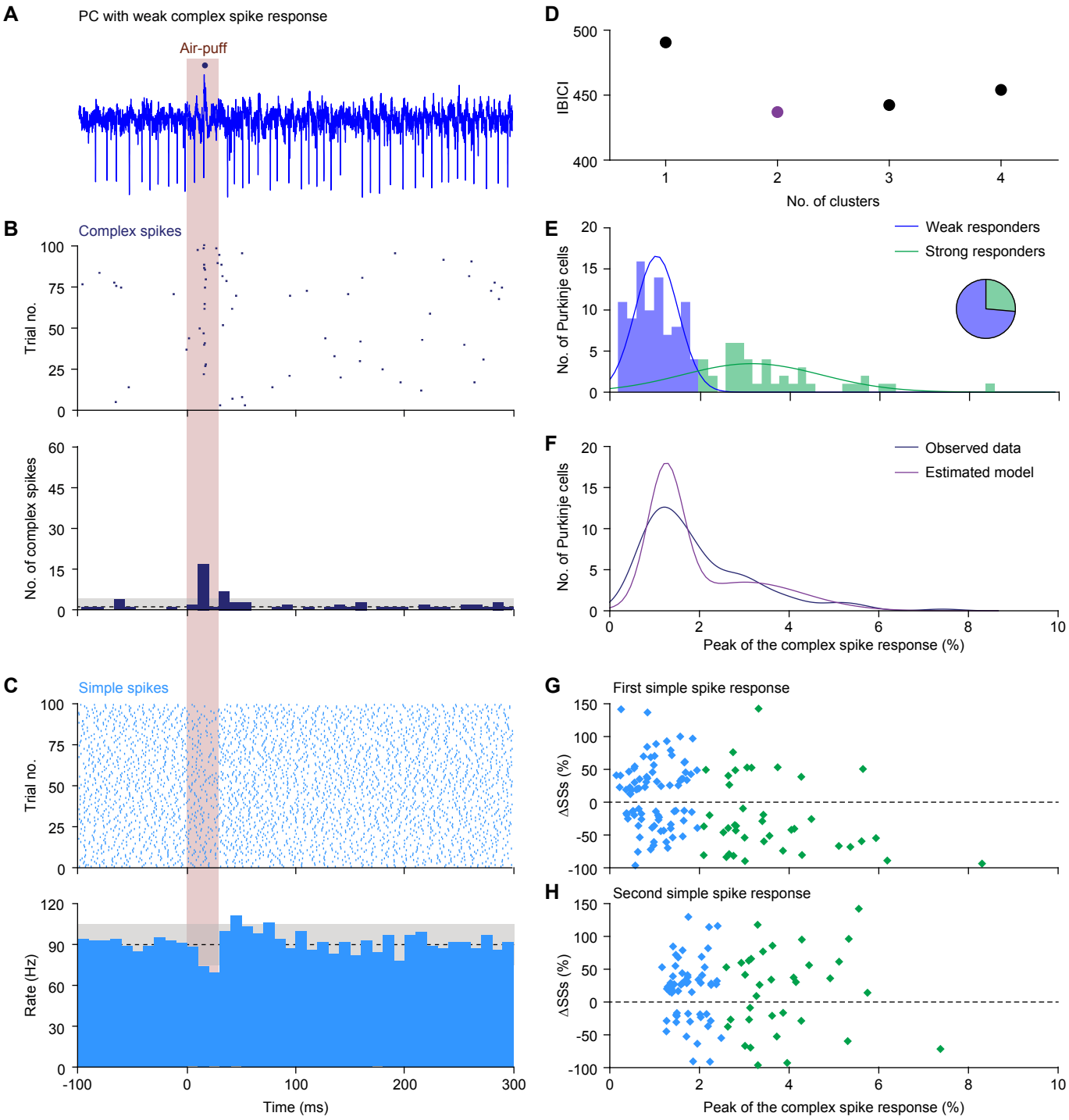

Figure 2 - figure supplement 1 | Diversity in Purkinje cell responses
A. Single trial of a PC showing a relatively weak complex spike response to air-puff stimulation of the ipsilateral whisker pad. The dark blue dot indicates a complex spike. **B.** Raster plot and peri-stimulus time histogram (PSTH) of the complex spikes of the same neuron as in **A**. Note that although the initial response is relatively weak, being present only in about 15% of the trials, this is still much more than could be expected based on the frequency during the inter-trial intervals. The dashed line indicates the average complex spike rate in between trials with the grey area representing ± 3 s.d.. **C.** The same for the simple spike response. This PC has a bimodal simple spike response, first a decrease and then an increase in simple spike activity. **D.** Based upon the complex spike response probability, defined as the peak of the complex spike response in the convolved PSTH, clustering the PCs into two clusters yielded the smallest Bayesian information criterion (BIC) value. **E.** The majority (66%) of the PCs could be classified as "weak responders" and the minority (34%) as "strong responders" (see pie diagram). This classification was obtained using a univariate Gaussian mixture model (blue and green lines, representing the two clusters). **F.** Comparison of the distribution of the observed complex spike responses and that expected by our model. **G.** The strength of the complex spike response and the first peak or trough (cf. panel **C**) in the simple spike (SS) response were not significantly correlated. Only the PCs with a very strong complex response tended to have a decrease in the simple spike response. **H.** The same applied for the second extremum of the simple spike response. For this later phase the complex spike and the simple spike responses were even less correlated.