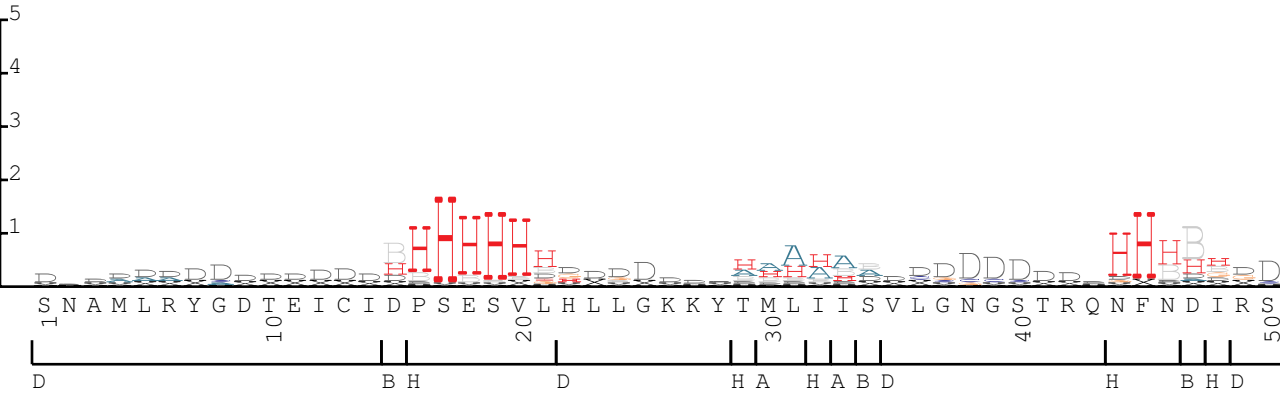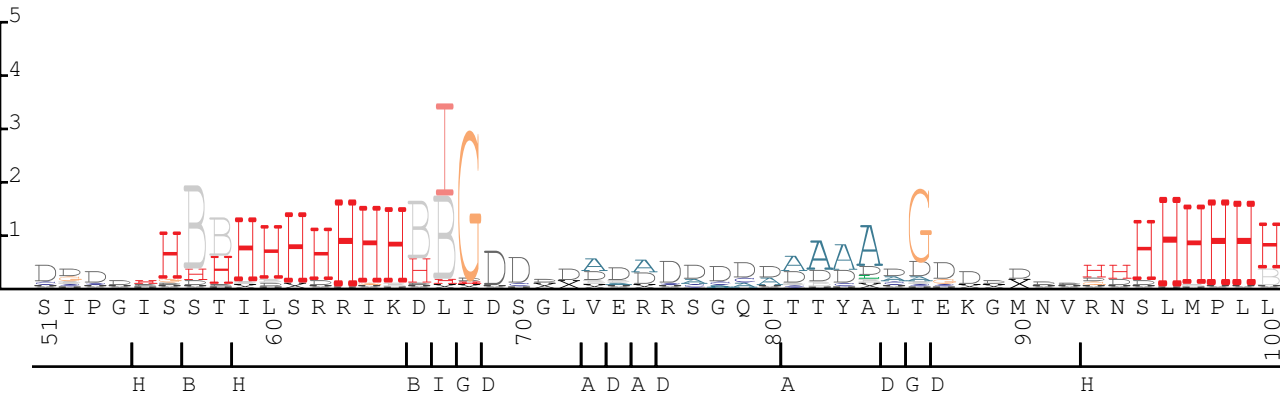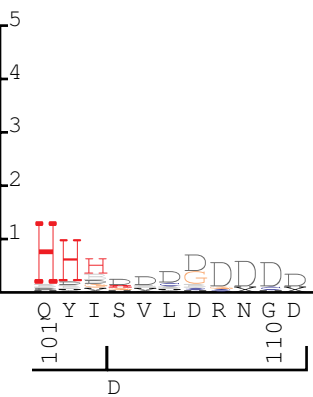T0459.t2k o_sep