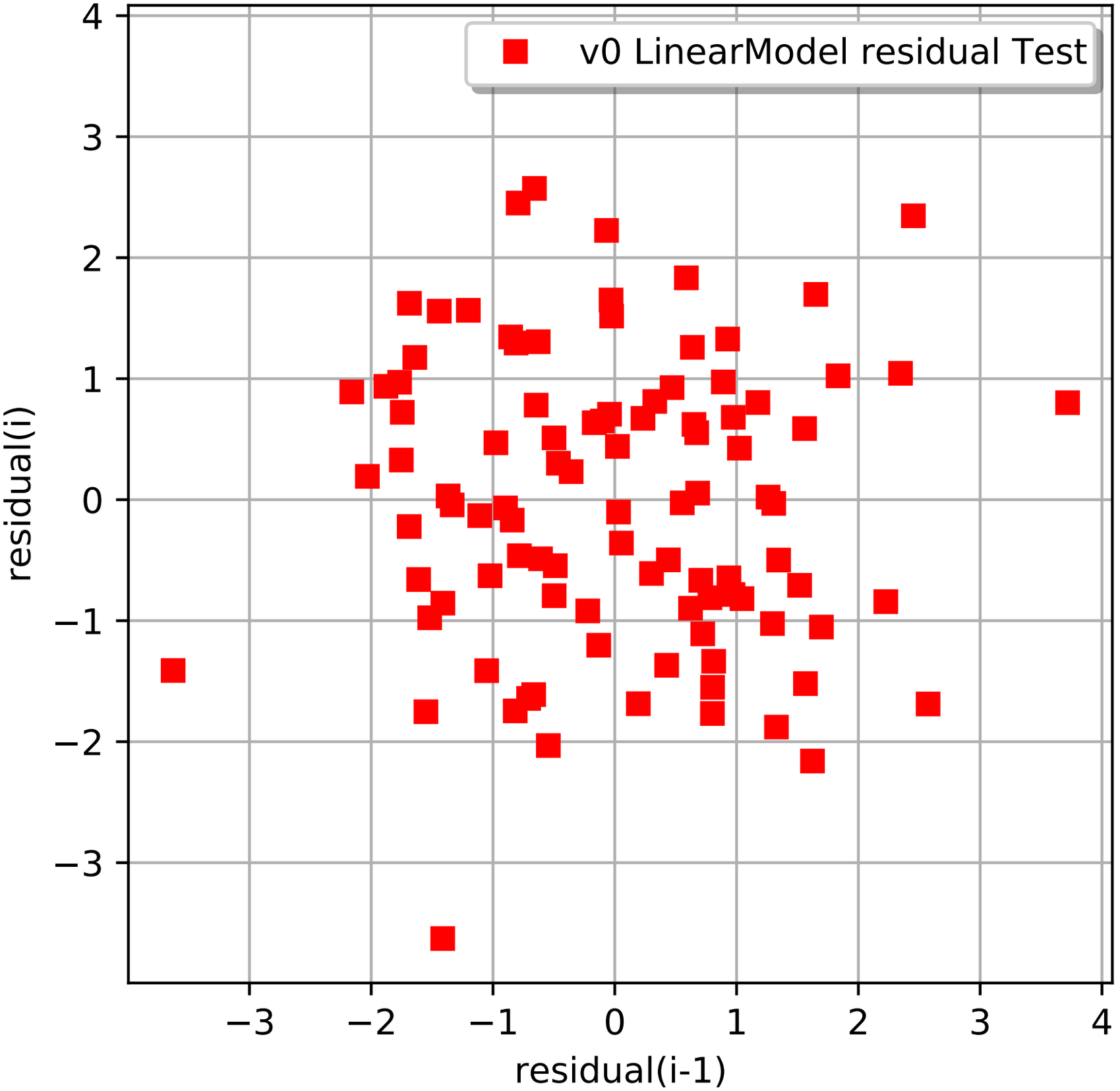residual(i) versus residual(i-1)