

24 In 1990, Carl Woese suggested a new top level taxon to the current system of classification of living organisms, which he termed a domain. He used his results from studying RNA to organise organisms into three distinct groups.

(a) (i) Name the cell component that appears in organisms of all three domains that Woese suggested.

..... [1]

(ii) One of the domains he suggested is called Eukarya.

Name the other **two** domains.

1

2

[2]

(iii) State **two** defining features of all members of the domain Eukarya.

.....

..... [2]

(b) Woese carried out a detailed study of RNA molecules in order to draw his conclusions.

Suggest **two** ways in which the scientific community are likely to have validated Woese's research.

.....

..... [2]