

Question	Marking Guidance	Mark	Comments
09.1	<ol style="list-style-type: none"> Different parts/areas/amino acid sequences (of amyloid-precursor) protein; Each enzyme is specific /fits/binds/ complementary to a different part of the APP; 	2	<ol style="list-style-type: none"> Accept APP Point 2 subsumes point 1 and is worth 2 marks total.
09.2	<ol style="list-style-type: none"> Peptide bond broken; Using water; 	2	Hydrolysis in stem
09.3	<ol style="list-style-type: none"> Mutations prevent production of enzyme(s)/functional enzyme; (Increase in β-secretase) leads to faster/more β-amyloid production OR (Decrease in α-secretase) leads to more substrate for β-secretase; (Leads to) more/greater plaque formation; 	3	2. 'This' must refer to α -secretase
09.4	<ol style="list-style-type: none"> (Inhibitor) binds to/blocks active site of β-secretase/enzyme; Stops/reduces production of β-amyloid/plaque; 	2	
09.5	<ol style="list-style-type: none"> Some β-amyloid required/needed (to prevent side effects) OR (Some) β-secretase needed; Leads to build-up of amyloid-precursor protein (that causes harm) OR Too much product of α-secretase (causes harm); 	1 max	<ol style="list-style-type: none"> Accept 'Both enzymes needed' Accept build-up of substrate (leads to harm)