

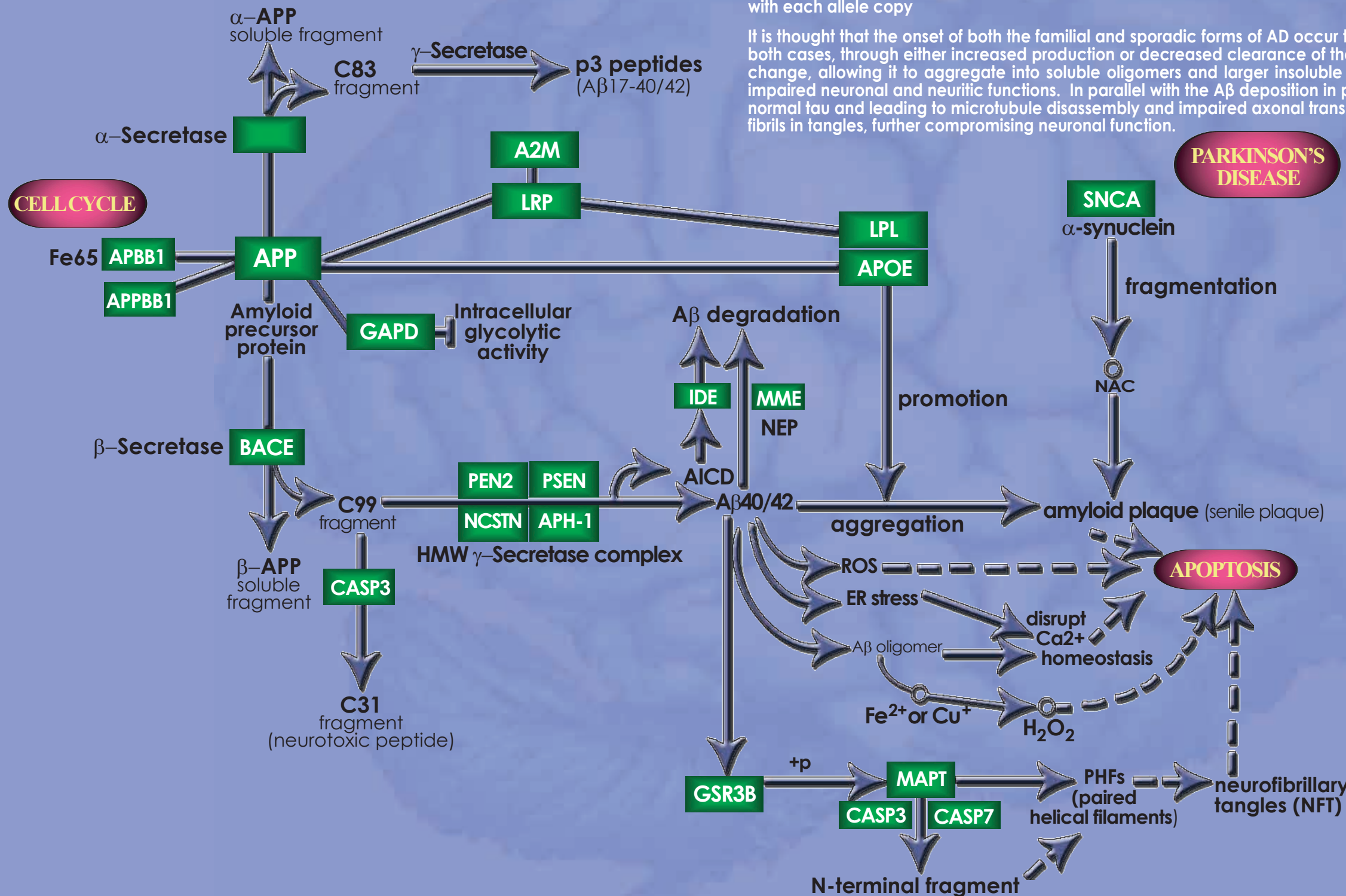
ALZHEIMER'S DISEASE

Alzheimer's Disease:

Alzheimer's disease (AD) is the most common form of dementia, accounting for more than half of all cases. The clinical characteristics include memory disturbances and at the microscopic level, neuritic plaques and neurofibrillary tangles in the medial temporal lobe structures and cortical areas of the brain coupled with a more general degeneration of the neurons and synapses. The major components of these neuritic plaques and neurofibrillary tangles are amyloid β ($A\beta$), a cleavage product of the amyloid precursor protein (APP), and hyperphosphorylated tau, an axonal protein that normally promotes microtubule assembly and stability, respectively.

Familial Alzheimer's disease accounts for only 0.1% of all cases, with the vast majority of the remainder of the cases considered as 'sporadic'. The first gene linked to Alzheimer's disease was identified as the APP gene on chromosome 21. However, mutations in the presenilin 1 and 2 genes are thought to account for most forms of the familial disease. An allele of another protein, Apolipoprotein E (APOE) ϵ 4, has been linked to increased risk of the sporadic form of AD, with each allele copy

It is thought that the onset of both the familial and sporadic forms of AD occur through similar mechanisms years before any clinical symptoms appear. In both cases, through either increased production or decreased clearance of the APP cleavage products, normally soluble $A\beta$ undergoes a conformational change, allowing it to aggregate into soluble oligomers and larger insoluble fibrils in plaques, leading to inflammatory responses, oxidative stress, and impaired neuronal and neuritic functions. In parallel with the $A\beta$ deposition in plaques, tau protein phosphorylation increases, causing the sequestration of normal tau and leading to microtubule disassembly and impaired axonal transport. The hyperphosphorylation of tau induces it to aggregate into insoluble fibrils in tangles, further compromising neuronal function.



Antibodies:	
CAT.NO.	PRODUCT NAME
XAV-8418	Amyloid-B1-40 polyclonal antibody
2133	APP polyclonal antibody
2136	APP polyclonal antibody
XBP-4001	APP [phospho-T668] polyclonal antibody
XG-6130	APP extra protein polyclonal IgY antibody
2253	BACE polyclonal antibody
2249	BACE2 polyclonal antibody
2247	BACE2 polyclonal antibody
XBP-4308	β -Amyloid 40 polyclonal antibody
3451	Caspase 4 polyclonal antibody
3465	Caspase 7 polyclonal antibody
3856	Clusterin polyclonal antibody
XA-1007	Clusterin (CLI-9) monoclonal antibody
3781	GAPDH polyclonal antibody
3983	Nicastrin polyclonal antibody
3975	PDCD4 polyclonal antibody
3979	PEN2 polyclonal antibody
XG-6101	Presenilin 1 polyclonal IgY antibody
XG-6102	Presenilin 2 polyclonal IgY antibody
XBP-4283	Tau [phospho-S5199/202] glyc polyclonal antibody
4001	APH1 polyclonal antibody
4057	Tau polyclonal antibody

Detection Set:	
CAT.NO.	PRODUCT NAME
PSI-1812	Alzheimer's Disease β -Amyloid Protein Detection Set
4 Polyclonal Antibodies: APP (CT), APP ($A\beta$ -NT), BACE and BACE2.	

Lysates: (Total Protein, Cytoplasmic, Membrane and Nuclear Fractions)	
CAT.NO.	PRODUCT NAME
XBL10274	Alzheimer's Disease Amygdala tissue lysate
XBL10278	Alzheimer's Disease Corpus Callosum tissue lysate
XBL10282	Alzheimer's Disease Frontal Lobe tissue lysate
XBL10286	Alzheimer's Disease Hippocampus tissue lysate
XBL10290	Alzheimer's Disease Occipital lobe tissue lysate
XBL10294	Alzheimer's Disease Parietal Lobe tissue lysate
XBL10298	Alzheimer's Disease Pons tissue lysate
XBL10302	Alzheimer's Disease Postcentral Gyrus tissue lysate
XBL10306	Alzheimer's Disease Precentral Gyrus tissue lysate
XBL10310	Alzheimer's Disease Thalamus tissue lysate
XBL10314	Alzheimer's Disease Temporal Lobe tissue lysate

Please visit www.prosci-inc.com for a complete listing of all Alzheimer's Disease antibodies and reagents available from ProSci.