



UNIVERSITY OF
FLORIDA

seeks partner to license

Ubiquitin Antibodies

The University of Florida is seeking companies interested in commercializing antibodies that are useful in studies of Alzheimer's and other related neurological disorders. These antibodies identify the protein, ubiquitin, which is covalently bonded to the neurofibrillary tangles and paired helical filaments diagnostic of Alzheimer's disease. Ubiquitin is also covalently attached to a variety of other pathological inclusions such as the Lewy bodies seen in Parkinson's disease and the Pick bodies seen in Pick's disease. Each kind of inclusion body, when stained with these antibodies, has a characteristic and readily recognizable morphology. The antibodies work on cryostat sections and also on formalin fixed paraffin embedded histological sections of human and other mammalian tissues, and can therefore be used in a diagnostic pathology laboratory. The monoclonal antibody, Ubi-1, has also been used successfully and routinely in automated immunostaining machines. Because the antibodies to ubiquitin stain these elements specifically and cleanly, these antibodies have become widely used around the world for research and diagnostic purposes.

Applications

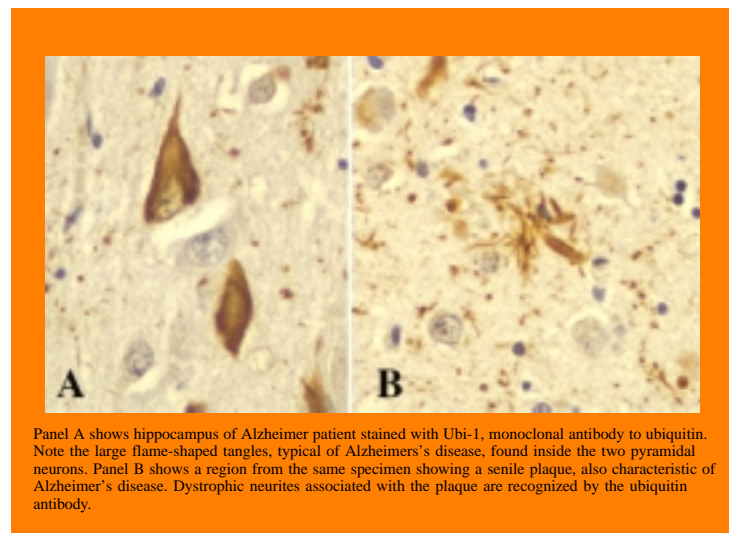
- ◆ Diagnosis of Alzheimer's disease
- ◆ Identification of a variety of neuropathological inclusions
- ◆ General studies of ubiquitin

Advantages

- ◆ Specifically and cleanly targets ubiquitin, minimizing potential errors in research
- ◆ Highlights only ubiquitinated pathological inclusions giving almost no background in normal tissues
- ◆ Already widely used and well characterized

The Technology

The ubiquitin antibodies detect and stain neurofibrillary tangles and paired helical filaments, making them easily recognizable. The antibodies bind preferentially to ubiquitin conjugates, and so recognize ubiquitinated inclusion bodies quite specifically. Normal brains do not contain such aberrant ubiquitinated inclusions, so their presence reliably indicates a neurological disorder such as Alzheimer's, Parkinson's or Pick's disease.



Ubiquitin Antibodies

The Inventor

Dr. Gerard Shaw is currently a Professor of Neuroscience and adjunct Professor of Anatomy and Cell Biology in the University of Florida College of Medicine. He earned his bachelor's degree at University College London and his Ph.D. at King's College London. He then worked as post-doctoral fellow and as a staff member at the Max Planck Institute for Biophysical Chemistry in Göttingen, Germany, before coming to Florida in 1986. He has written numerous research articles, book chapters and one book on his research interests, which include the neuronal cytoskeleton, cellular signal transduction and computational methods of protein and nucleic acid sequence analysis.

In addition to research, Dr. Shaw is an active teacher and administrator and has repeatedly served as a reviewer for the National Institutes of Health, the National Science Foundation, the Medical Research Councils of the U.K. and of Canada, and for the Burroughs Wellcome Foundation.



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To Serve Faculty and Community*