

## Amylo-Glo RTD Amyloid Plaque Stain Reagent

<b>Catalogue No.:</b>	TR-300-AG
<b>Description:</b>	Amylo-Glo RTD Ready to Dilute Staining reagent is designed to stain amyloid plaques in tissue sections. This novel marker has several advantages over other conventional markers such as Thioflavin S and Congo Red because of its unique chemical and spectral properties. (L. Schmued et al. (2012) J.Neuroscience Methods 209:120- 126). Using Amylo-Glo results in a very bright blue UV excitable stain under physiological conditions that will not bleed through when illuminated with other filters. Its brightness makes it ideal for low magnification quantification studies, while its unique excitation/emission profile and mild staining conditions makes it ideal for combination for multiple immunofluorescent labeling studies. Amylo-Glo RTD is compatible with fresh, frozen, and formalin-fixed immunohistochemistry or cytochemistry, and it is particularly good for confocal and multiple labeling because of its high fluorescent intensity and high resistance to photo-bleaching. Moreover because Amylo-Glo fluoresces in the UV channel, double and triple labeling experiments can be performed very easily (see protocol).
<b>Related products:</b>	Amylo-Glo / EB kit catalog number TR-400-AG
<b>Batch No.:</b>	See vial label
<b>Other Names:</b>	AmyloGlo
<b>Compound Name:</b>	Compound: Amylo-Glo; Classification: Styrylbenzene derivative; Appearance: Yellow solution; Molecular Weight: 392; Filter system for visualizing: UV
<b>Purity:</b>	Thin layer chromatography using alumina plates and a solvent system of ethanol and water (3:1) revealed the presence of two fluorescent isomers. No amount of starting material was detected.
<b>Applications:</b>	Staining of amyloid plaques in human and animal tissues, see included protocol
<b>Specificity:</b>	amyloid plaques both intraneuronal and vascular
<b>Appearance:</b>	Excitation Peak: 334; Emission Peak: 533 nm - unbound, 438 nm when bound to amyloid. To visualize Amylo-glo in tissue, UV light is required. For example, Amylo-Glo tissue can be examined using an epifluorescent microscope with UV (Nikon UV-2A) filter cube. Excitation (325-375nm) Emission (400-450nm) is typical. Also note, it is not uncommon for Amylo-Glo to appear light yellow when examined by eye, yet appear a light blue color when photographed.
<b>Reconstitution:</b>	Ready to dilute per protocol; 100X
<b>Storage:</b>	The stock solution can be stored for up to 6 months after date of receipt at 2-8C protected from light. No preservatives. Use sterile technique when handling and proper laboratory procedures.
<b>Expiry Date:</b>	6 months from date of purchase
<b>Specific References:</b>	Collins MJ et al. (2019) "Age moderates the effects of traumatic brain injury on beta-amyloid plaque load in APP/PS1 mice." J Neurotrauma. [Epub ahead of print]; Application: IHC/IF Species: Mouse  Shukla AK et al. (2018) "CD11a expression distinguishes infiltrating myeloid cells from plaque-associated microglia in Alzheimer's disease." Glia. [Epub ahead of print]; Application:

FOR RESEARCH USE ONLY

## Amylo-Glo RTD Amyloid Plaque Stain Reagent

IHC/IF Species: Mouse

Feng X et al. (2018) "Quantitative proteomics reveals distinct composition of amyloid plaques in Alzheimer's disease.

"Alzheimers Dement. [In press]; Application: IHC/IF Species: Human, mouse

Davis J et al. (2018) "A Novel Transgenic Rat Model of Robust Cerebral Microvascular Amyloid with Prominent Vasculopathy.

"Am J Pathol. [Epub ahead of print]; Application: IHC/IF Species: Rat

Palombo F et al. (2017) "Detection of A $\beta$  plaque-associated astrogliosis in Alzheimer's disease brain by spectroscopic imaging and immunohistochemistry."Analyst. [Epub ahead of print]; Application: IF Species: Mouse

Abud EM (2017) "Generation of Human Microglia from Induced Pluripotent Stem Cells to Study Innate Immunity in Neurological Diseases."PhD Thesis. 2017; Application: IF Species: Mouse

Abud EM et al. (2017) "iPSC-Derived Human Microglia-like Cells to Study Neurological Diseases."Neuron. 2017; 49(2):278-93 Application: IF Species: Mouse

Solomon IH et al. (2017) "Brain and liver pathology, amyloid deposition, and interferon responses among older HIV-positive patients in the late HAART era."BMC Infect Dis. 2017; 17(1):151 Application: IF Species: Human

Xu F et al. (2016) "Cerebral vascular amyloid seeds drive amyloid  $\beta$ -protein fibril assembly with a distinct anti-parallel structure."Nat Commun. 2016; 7:13527. Application: IF Species: Mouse

Katsouri L et al. (2016) "PPAR $\gamma$ -coactivator-1 $\alpha$  gene transfer reduces neuronal loss and amyloid- $\beta$  generation by reducing  $\beta$ -secretase in an Alzheimer's disease model ."Proc Natl Acad Sci USA. 2016; 113(43):12292-97. Application: IF Species: Mouse

Esposito G et al. (2016) "Autologous transplantation of intestine-isolated glia cells improves neuropathology and restores cognitive deficits in  $\beta$  amyloid-induced neurodegeneration."Sci Rep. 2016; 6: 22605. Application: IF Species: Rat

Marsh SE et al. (2016) "The adaptive immune system restrains Alzheimer's disease pathogenesis by modulating microglial function."

Proc Natl Sci USA. Feb 16. pii: 201525466. Application: IF Species: Hu Fibrillar amyloid visualization.

Kim YH et al. (2015) "A 3D human neural cell culture system for modeling Alzheimer's

---

FOR RESEARCH USE ONLY

---

## Amylo-Glo RTD Amyloid Plaque Stain Reagent

disease."

Nat Protoc. Jul;10(7):985-1006. Application: IF Species: Hu, Human neural stem-cell-derived three-dimensional (3D) culture system.

Nijholt DA et al. (2015) "Pregnancy Zone Protein is Increased in the Alzheimer's Disease Brain and Associates with Senile Plaques."

J Alzheimer's Disease. 46(1):227-38. Application: IF Species: Hu

Kamphuis W et al. (2015) "GFAP and vimentin deficiency alters gene expression in astrocytes and microglia in wild-type mice and changes the transcriptional response of reactive glia in mouse model for Alzheimer's disease."

Glia. Jun;63(6):1036-56. Application: IF Species: Mouse

Choi SH et al. (2014) "A three-dimensional human neural cell culture model of Alzheimer's disease."

Nature Oct 12. doi: 10.1038/nature1380. Application: IF Species: Hu, Human neural stem-cell-derived three-dimensional (3D) culture system.

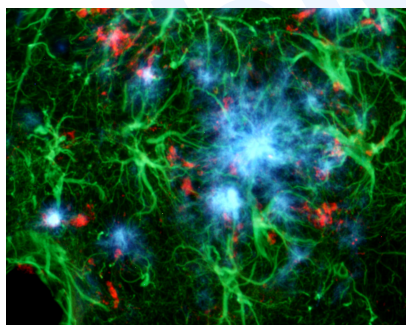
Niedowicz DM et al. (2014). "Obesity and diabetes cause cognitive dysfunction in the absence of accelerated beta-amyloid deposition in a novel murine model of mixed or vascular dementia." Acta Neuropathol Commun. 2014 Jun 10;2:64.

**General References:** L. Schmued et al. (2012) J.Neuroscience Methods 209:120, 126

**Kit Components:** 5 mL of 100X Amylo-Glo RTD (A-G RTD) solution

**Reagent Kit protocol:** Please refer to our online product listing for current protocol/MSDS versions.

**MSDS:** Please refer to our online product listing for current protocol/MSDS versions.



This triple exposure allows for the simultaneous localization of Amylo-Glo® positive amyloid plaques (blue), GFAP positive hypertrophied astrocytes (green) and activated microglia (red) in the hippocampus of the AD/Tg mouse. Combined UV, blue and green light illumination.

---

FOR RESEARCH USE ONLY