

Resource Summary Report

Generated by [dkNET](#) on Sep 21, 2026

Polarity Hybrid Chemical Tag & IHC for Adult CNS

DOI:10.17504/protocols.io.nycdfsw

Type: Protocol

Proper Citation

Geoffrey W. Meissner, Jonathan B. Grimm, Rebecca M. Johnston, Ben Sutcliffe, Julian Ng, Gregory S.X.E. Jefferis, Sebastian Cachero, Luke D. Lavis, Oz Malkesman 2018. Polarity Hybrid Chemical Tag & IHC for Adult CNS. protocols.io dx.doi.org/10.17504/protocols.io.nycdfsw

Protocol Information

URL: <https://dx.doi.org/10.17504/protocols.io.nycdfsw>

Authors: Geoffrey W. Meissner, Jonathan B. Grimm, Rebecca M. Johnston, Ben Sutcliffe, Julian Ng, Gregory S.X.E. Jefferis, Sebastian Cachero, Luke D. Lavis, Oz Malkesman

Summary: The use of genetically encoded 'self-labeling tags' with chemical fluorophore ligands enables rapid labeling of specific cells in neural tissue. To improve the chemical tagging of neurons, we synthesized and evaluated new fluorophore ligands based on Cy, Janelia Fluor, Alexa Fluor, and ATTO dyes and tested these with recently improved *Drosophila melanogaster* transgenes. We found that tissue clearing and mounting in DPX substantially improves signal quality when combined with specific non-cyanine fluorophores. We compared and combined this labeling technique with standard immunohistochemistry in the *Drosophila* brain.

Associated Publications: Meissner GW, Grimm JB, Johnston RM, Sutcliffe B, Ng J, Jefferis GSXE, Cachero S, Lavis LD, Malkesman O (2018) Optimization of fluorophores for chemical tagging and immunohistochemistry of *Drosophila* neurons. PLoS ONE 13(8): e0200759. doi: [10.1371/journal.pone.0200759](https://doi.org/10.1371/journal.pone.0200759)

Affiliations: Janelia Research Campus, Howard Hughes Medical Institute, Ashburn, Virginia, USA, Janelia Research Campus, Howard Hughes Medical Institute, Ashburn, Virginia, USA, Janelia Research Campus, Howard Hughes Medical Institute, Ashburn, Virginia, USA, Division of Neurobiology, Medical Research Council Laboratory of Molecular Biology, Cambridge CB2 0QH, United Kingdom, Division of Neurobiology, Medical Research Council Laboratory of Molecular Biology, Cambridge CB2 0QH, United Kingdom, Division of Neurobiology, Medical Research Council Laboratory of Molecular Biology, Cambridge CB2 0QH, United Kingdom, Division of Neurobiology, Medical Research Council Laboratory of Molecular Biology, Cambridge CB2 0QH, United Kingdom, Janelia Research Campus, Howard Hughes Medical Institute, Ashburn, Virginia,

USA, Janelia Research Campus, Howard Hughes Medical Institute, Ashburn, Virginia, USA

External URL: <https://doi.org/10.1371/journal.pone.0200759>

Version: 1

Publication Date: 2018

Proper Citation: Geoffrey W. Meissner, Jonathan B. Grimm, Rebecca M. Johnston, Ben Sutcliffe, Julian Ng, Gregory S.X.E. Jefferis, Sebastian Cachero, Luke D. Lavis, Oz Malkesman 2018. Polarity Hybrid Chemical Tag & IHC for Adult CNS. protocols.io dx.doi.org/10.17504/protocols.io.nycdfsw

Record Creation Time: 20210329T220547+0000

Record Last Update: 20210329T221201+0000

Data and Source Information

Source: