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DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Government-Owned Inventions; Availability for Licensing

AGENCY: National Institutes of Health, HHS.

ACTION: Notice.

SUMMARY: The invention listed below is owned by an agency of the U.S. Government and is available for licensing to achieve expeditious commercialization of results of federally-funded research and development. Foreign patent applications are filed on selected inventions to extend market coverage for companies and may also be available for licensing.

FOR FURTHER INFORMATION CONTACT: Ben Hurley at 240-669-5092, or benjamin.hurley@nih.gov. Licensing information may be obtained by communicating with the Technology Transfer and Intellectual Property Office, National Institute of Allergy and Infectious Diseases, 5601 Fishers Lane, Rockville, MD 20852: tel. 301-496-2644. A signed Confidential Disclosure Agreement will be required to receive copies of unpublished information related to the invention.

SUPPLEMENTARY INFORMATION:

Hybridoma Cell Lines 2A4 and 5B12 against Puromycin

Description of Technology:

Protein translation is a central cellular function attracting increasing attention from cell biologists as they integrate gene product specific information into a systems view of cellular function. Scientists at NIAID developed the puromycin-specific antibodies that allow for the specific detection of puromycin-containing nascent polypeptides via standard immunofluorescence or flow cytometry. The resulting ribopuromycylation method (RPM) localizes translation in cells and can be applied to any PMY-sensitive

eukaryotic or prokaryotic cell to study the dynamics of protein synthesis at the cellular level and investigate translational processes. It can also be used *in vitro* or *in vivo* to measure the number of translating ribosomes using flow cytometry.

This technology is available for licensing for commercial development in accordance with 35 U.S.C. 209 and 37 CFR part 404, as well as for further development and evaluation under a research collaboration.

Potential Commercial Applications:

- Broad application for studying protein translation.

Competitive Advantages:

- This technology generates antibodies specific for puromycin that can be used to localize translating ribosomes in all cell types.

Development Stage:

- Research Materials

Inventors: Jonathan Yewdell, MD, Ph.D., Alexandre David, Ph.D., both of NIAID.

Publications:

David A, Dolan BP, Hickman HD, Knowlton JJ, Clavarino G, Pierre P, Bennink JR, Yewdell JW. Nuclear translation visualized by ribosome-bound nascent chain puromycylation. J Cell Biol. 2012 Apr 2;197(1):45-57. doi: 10.1083/jcb.201112145. PMID: 22472439; PMCID: PMC3317795.

Also: PMID 29552591, 27385780, 25311127, 23229864

Intellectual Property: HHS Reference No. E-003-2021

Licensing Contact: To license this technology, please contact Ben Hurley at 240-669-5092, or benjamin.hurley@nih.gov, and reference E-003-2021.

Collaborative Research Opportunity: The National Institute of Allergy and Infectious Diseases is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize this technology. For collaboration opportunities, please contact Ben Hurley at 240-669-5092, or benjamin.hurley@nih.gov.

Date: January 19, 2024.

Surekha Vathyam,

Deputy Director,

Technology Transfer and Intellectual Property Office,

National Institute of Allergy and Infectious Diseases.

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