New Product: Mono-Biotin Saporin

The conjugation specialists at Advanced Targeting Systems are proud to announce a new addition to the catalog:

Mono-Biotin Saporin
Cat. #BT-PR01

Researchers now have more freedom in selecting conjugation strategies. Users have taken advantage of the ability to use biotinylated targeting agents with Streptavidin-ZAP (Cat. #IT-27) a chemical conjugate between saporin and streptavidin. Streptavidin-ZAP converts biotinylated materials into targeted toxins. Streptavidin is a tetrameric protein (molecular weight 53 kDa in its recombinant form), with each subunit able to bind a single biotin molecule. The bond between streptavidin and biotin is rapid and essentially non-reversible, unaffected by most extremes of pH, organic solvents, and denaturing reagents. It is the strongest known noncovalent biological interaction ($Ka = 10^{15}\ M^{-1}$) between protein and ligand. The streptavidin used to make Streptavidin-ZAP contains no carbohydrate group and has a neutral isoelectric point, which therefore reduces the nonspecific binding as compared to avidin. A variety of molecules, including lectins, proteins, and antibodies, can be biotinylated and reacted with streptavidin-labeled probes or other detection reagents for use in biological assays.

Now, there is **Mono-Biotin Saporin**, a chemical conjugate between saporin and biotin. Each lot is specifically manufactured and analyzed to have an average molecular ratio of **one biotin per one saporin**. The assurance of consistency as well as the controlled labeling potential between lots makes this a valuable new research tool. Use this new tool *in vitro* or *in vivo* with your targeting agent to broaden your targeted toxin possibilities.[1]

Saporin is a ribosome-inactivating protein, molecular weight 30 kDa, from seeds of the plant *Saponaria officinalis*.

- ***Saporin is safe for laboratory use under normal safety conditions***
- ***LD_{50} in mice is 4 mg/kg***
- ***Saporin does not have a method of cell entry on its own***

Reference

Minami SS, Sun B, Popat K, Kauppinen T, Pleiss M, Zhou Y, Ward ME, Floreancig P, Mucke L, Desai T, Gan L. (2012) Selective targeting of microglia by quantum dots. *J Neuroinflammation* 9:22.

Society for Neuroscience
October 17-21, 2015
Chicago, IL
Booth #662

Experimental Biology
April 2-6, 2016
San Diego, CA
Booth #TBA

Upcoming Events

Targeting Teaser Solution

The solution to the puzzle was:

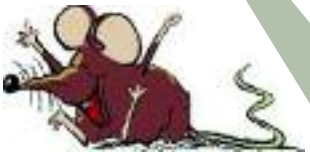
Jumbles: SCLEROTOME
CATHETER
LUMBAR
FLUID
INACTIVATING

What the students did when school was out for the summer.

Answer: They studied the SCIENCE of VACATION!

Solve this quarter's teaser at www.ATSbio.com/news/15q4_teaser.html

Congratulations to the puzzle solvers from last quarter. Each winner will receive a $100 ATS product credit.



LAST QUARTER'S WINNERS: Seto Chice, SUNY HSC at Brooklyn * Corinne Kiessling, Binghamton University, NY