RNA Binding YSi (2-5µm) SPA Beads

Product Number: RPNQ0013 (500 mg)

Warning

For research use only.
Not recommended or intended for diagnosis of disease in humans or animals.
Do not use internally or externally in humans or animals.

Storage

These RNA binding YSi (2–5 µm) SPA beads are supplied as a suspension in water, containing 500 mg total per vial, at a concentration of 100 mg/ml. This material should be stored protected from light at 2–8°C.

Expiration

Once Reconstituted, the beads are stable for up to 7 days when stored in the appropriate conditions.

Safety Warnings and Precautions

All chemicals should be considered as potentially hazardous. We therefore recommend that this product is handled only by those persons who have been trained in laboratory techniques and that it is used in accordance with the principles of good laboratory practice. Wear suitable protective clothing such as laboratory overalls, safety glasses and gloves. Care should be taken to avoid contact with skin or eyes. In the case of contact with skin or eyes wash immediately with water. See material safety data sheet(s) and/or safety statement(s) for specific advice.

CAUTION: For use with radioactive material.
This product is to be used with radioactive material. Please follow the manufacturer's instructions relating to the handling, use, storage, and disposal of such material.

Quality Control

Each batch of RNA binding YSi beads is tested for the relative binding capacity of [3H]adenosine monophosphate (AMP) in water.

PLEASE NOTE: Anti-microbial agents are not included in this reagent. The user should therefore be aware that microbial contamination may occur when the reconstituted beads are stored for prolonged periods (> 20 weeks), or are wrongly stored. If antimicrobial agents (eg Sodium Azide) are added on storage, then it remains the responsibility of the user to evaluate the effects of the added agent on the assay.
Avoid exposure of the Yttrium Silicate beads and finished assays to halogen light. Exposure of the Yttrium Silicate beads to halogen light can cause elevated counts due to phosphorescence. If elevated counts due to light exposure are observed, place the assay in the dark for a minimum of four hours before counting.

ASSAY CONDITIONS

The binding of radiolabelled [3H]AMP (see Quality Control) brings the isotope into close proximity with the scintillant which is incorporated within the bead. This allows the emitted radiation (beta-particles) to stimulate the scintillant to emit light. Any unbound radiolabelled ligand is not in close enough proximity to the scintillant to allow such energy transfer and hence no signal is generated. Light emitted by stimulated SPA beads can be detected by either conventional scintillation counters or multidetector instruments. Other isotopes, such as [33P] or [125I], may be used in SPA format. It remains the responsibility of the user to optimize the amount of SPA bead required and the incubation time required for each assay. To achieve optimal counts, excess bead should be present in order to capture all of the activity present in the assay tube. If employing receptor preparations, such as that found in microsomal preparations, the amount of receptor preparation together with the radiolabelled ligand being used needs to be optimized for each assay.

Samples which are colored may require color quench correction.

COUNTER SETTINGS

It is essential that the following counter settings are used for SPA in Yttrium Silicate-based assays

Packard TopCount™ window settings
3H Region A = 0.00 - 50.00 Region B = 0.00 - 256.0
125I Region A = 0.00 - 100.0 Region B = 0.00 - 256.0
Window settings for alternative isotopes can be determined using the 'REGION REVIEW' facility.
For Version 4 software (or higher)
Settings for 3H and 125I are preinstalled in the nucleide library as
3H-YSi-SPA and 125I-YSi-SPA.
Scintillator .....Glass
Energy Range .....Low
Efficiency mode .....Hi Sen

Wallac MicroBeta™ window settings
3H 5 - 500
125I 5 - 560
Window settings for alternative isotopes can be determined printing the pulse-height spectrum (PRINT 'SPECTRA') for the isotope of interest

RPNQ0013-R Rev01

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