Streptavidin Coated PVT SPA Beads

Product Number: RPNQ0067 (25 x 2g)

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

Streptavidin SPA beads are supplied as a lyophilized solid containing 10% sucrose by weight. 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

Biotin binding capacity (as determined by binding of [3H] biotin to bead) is always greater than 100 pmoles/mg bead and is typically in the range 100–200 pmoles/mg bead. However, the binding capacity of [3H] biotin is not necessarily indicative of the binding capacity of biotin labelled substrates. The effective binding capacity of biotin labelled substrates should be optimized experimentally by the user.

BEAD RECONSTITUTION

Before use the beads should be reconstituted in a buffer appropriate for the particular assay to be performed. The streptavidin SPA beads should be mixed to ensure a homogeneous suspension while pipetting into the assay tubes. This may be done

either by recapping and shaking the bottle at regular intervals or by gently stirring with a magnetic stirrer. Reconstituted beads can usually be stored at 2–8°C for up to seven days. **DO NOT FREEZE.**

PLEASE NOTE: The streptavidin SPA beads have been freeze-dried from a 1% sucrose solution. Antimicrobial 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. 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.

ASSAY CONDITIONS

Streptavidin SPA beads are designed for use in assay systems employing a biotinylated acceptor molecule or substrate and can be used in either capture or cleavage assay formats. The binding of radiolabelled biotinylated compounds to the streptavidin SPA beads brings the isotope into close proximity to the scintillant. This allows the emitted radiation (beta-particles for [3H] or Auger electrons for [125I]) 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.
To achieve optimal counts excess streptavidin SPA bead should be present in order to bind all of the biotinylated molecules in the assay. The quantity of bead required may be calculated from the [3H] biotin binding data supplied with each batch of reagent, but it is recommended that it is determined empirically. It remains the responsibility of the user to optimize the amount of streptavidin SPA bead required for each assay, the incubation time required for each assay and the incubation time required to achieve complete binding of the biotinylated molecules. In general, streptavidin SPA beads will give approximately 30–45% of the cpm expected from conventional liquid scintillation counting, but the SPA counts obtained will depend on the isotope used, the type of counter used and the absolute efficiency of the instrument.

Samples which are colored may require color quench correction.

RPNQ0067-R Rev01

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