Wheatgerm Agglutinin Coupled Yttrium Oxide Imaging Beads

Product Number: RPNQ0270 (500mg)

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

WGA coupled yttrium oxide imaging beads are supplied as a freeze-dried solid, containing 1% 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

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. 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. These beads are in the size range 1–5 microns and as such constitute a potential inhalation hazard when dry.

Quality Control

Each batch of wheatgerm agglutinin (WGA) coupled yttrium oxide imaging beads* is tested for the binding capacity of [3H]N,N′ ,N′′ triacetylchitotriose relative to a reference batch.

Bead Reconstitution

Before use, the beads should be reconstituted in a buffer appropriate for the particular assay to be performed. The beads should be thoroughly mixed to ensure a homogeneous suspension while pipetting. This may be done by continuous agitation of the bulk suspension with a magnetic stirrer. The user is advised to avoid the use of high ionic strength buffers or buffers containing high levels of phosphate ions as these may promote aggregation of

beads. It is recommended that suspensions of beads should be prepared in water or low ionic strength media for storage or dispensing then diluted with assay buffer immediately before use.

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. If anti-microbial agents (e.g. 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. Reconstituted beads can usually be stored in water or low ionic strength media at 2–8°C for up to seven days. DO NOT FREEZE.

Assay Conditions

WGA coupled yttrium oxide imaging beads, when coupled to membrane bound receptors, are designed to be used in ligand binding assays. During assay incubation, carbohydrate residues present in cell membranes bind to the WGA on the bead, effectively immobilizing the receptor-bearing membranes on to the bead. The binding of radiolabeled ligands to such immobilized receptors brings the isotope into close proximity with the europium scintillant which is incorporated within the bead. This allows the emitted radiation (beta-particles for [3H] or Auger electrons for [125I]) to stimulate the scintillant to emit light. Any unbound radiolabeled 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 Leadseeker Imaging beads can be detected by a ViewLux Imager. Other isotopes, such as [35S], may also be used in Leadseeker imaging format. It remains the responsibility of the user to optimize the amount of bead required and the incubation time required for each assay. To achieve optimal light output, excess beads 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 radiolabeled ligand being used needs to be optimized for each assay.

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Revvity, Inc.
940 Winter Street
Waltham, MA 02451 USA
(800) 762-4000
www.revvity.com