

## Polyethylene-Imine Coupled Polystyrene Imaging Beads

Product Number: RPNQ0297 (50mg)

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### 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

PS-PEI imaging beads are supplied by 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

Each batch of Polyethylene-imine Coupled Polystyrene (PS-PEI) Imaging Beads\* is tested for its relative binding capacity of [<sup>3</sup>H] Thymidine Triphosphate.

### BEAD RECONSTITUTION

Before use, the PS-PEI imaging beads should be reconstituted in a buffer appropriate for the particular assay to be performed. The beads should be mixed to ensure a homogeneous suspension while pipetting. This may be done by continuous agitation 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 PS-PEI imaging beads have been freeze-dried from a 1% sucrose solution. 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 (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

PS-PEI 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 PEI 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 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 imaging beads is detected using a ViewLux imager. Other isotopes such as [<sup>33</sup>P] and [<sup>35</sup>S] can also be used in LEADseeker imaging format. It remains the responsibility of the user to optimize the amount of reagent 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 receptor present in the assay tube. The amount of receptor preparation together with the radiolabeled ligand being used needs to be optimized for each assay.

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RPNQ0297-R Rev01

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