

## RanBP1 Agarose Beads

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**CATALOG NUMBER:** STA-421

**STORAGE:** -20°C

**QUANTITY AND CONCENTRATION:** 800  $\mu$ L of 50% Agarose slurry, 400  $\mu$ g RanBP1 (full length) in 1X PBS, 50% Glycerol

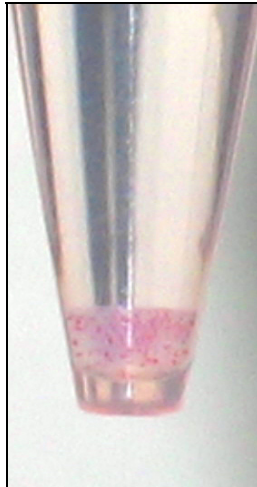
**SHELF LIFE:** 1 year from receipt under proper storage conditions; avoid multiple freeze thaw cycles

### **Background**

Small GTP-binding proteins (or GTPases) are a family of proteins that serve as molecular regulators in signaling transduction pathways. Ran, a 25 kDa protein of the Ras superfamily, regulates a variety of biological response pathways that include DNA synthesis, cell cycle progression, and translocation of RNA/proteins through the nuclear pore complex. Like other small GTPases, Ran regulates molecular events by cycling between an inactive GDP-bound form and an active GTP-bound form. In its active (GTP-bound) state, Ran binds specifically to RanBP1 to control downstream signaling cascades.

### **Presentation**

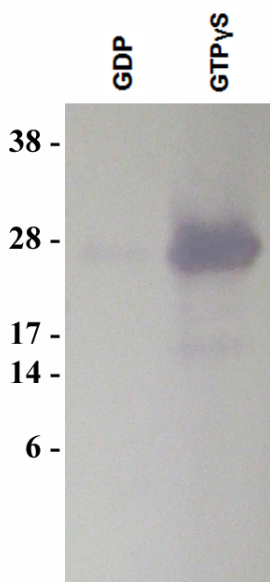
RanBP1 Agarose beads, in color, are easy to visualize, minimizing potential loss during washes and aspirations of Ran-GTP pulldown (Figure 1).



**Figure 1:** RanBP1 Beads in Color

## Activity

Product specifically interacts and precipitates GTP-bound Ran from cell lysate (Figure 2).



**Figure 2:** Ran Activation Assay. *Lane 1*, NIH 3T3 cell lysate loaded with GDP and incubated with RanBP1 Agarose beads. *Lane 2*, NIH 3T3 cell lysate loaded with GTP $\gamma$ S and incubated with RanBP1 Agarose beads.

## References

1. Melchior, F., B. Paschal, J. Evans, and L. Gerace (1993) *J. Cell Biol.* **123**:1649–1659.
2. Moore, M.S., and G. Blobel (1993) *Nature.* **365**:661–663.
3. Bamba, C., Y. Bobinnec, M. Fukuda, and E. Nishida (2002) *Curr. Biol.* **12**:503–507.
4. Carazo-Salas, R.E., G. Guarguaglini, O.J. Gruss, A. Segref, E. Karsenti, and I.W. Mattaj (1999) *Nature.* **400**:178–181.
5. Dasso, M (2001) *Cell.* **104**:321–324.

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