

## Rhotekin RBD Agarose Beads

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**CATALOG NUMBER:** STA-412

**STORAGE:** -20°C

**QUANTITY AND CONCENTRATION:** 800  $\mu$ L of 50% Agarose slurry, 400  $\mu$ g Rhotekin-RBD 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. Rho, a 21 kDa protein, regulating a variety of biological response pathways that include cell growth, cell transformation and tumor invasion. Like other small GTPases, Rho regulates molecular events by cycling between an inactive GDP-bound form and an active GTP-bound form. In its active (GTP-bound) state, Rho binds specifically to the Rho-binding domain (RBD) of Rhotekin to control downstream signaling cascades.

### **Presentation**

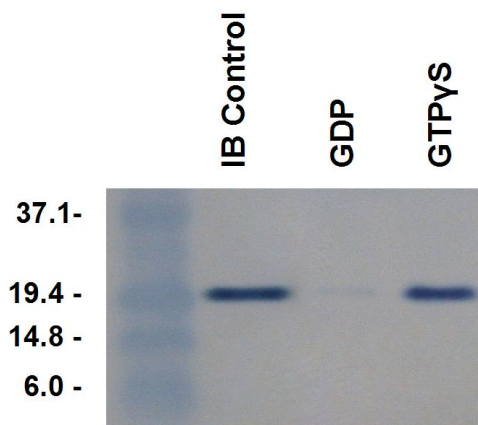
Rhotekin RBD Agarose beads, in color, are easy to visualize, minimizing potential loss during washes and aspirations of Rho-GTP pulldown (Figure 1).



**Figure 1:** Rhotekin-RBD Beads in Color

### **Activity**

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



**Figure 2:** Rho Activation Assay. *Lane 1*, GTPase Immunoblot Positive Control. *Lane 2*, MDA-231 cell lysate loaded with GDP and incubated with Rhotekin RBD Agarose beads. *Lane 3*, MDA-231 cell lysate loaded with GTP $\gamma$ S and incubated with Rhotekin RBD Agarose beads.

### References

1. Ren X.D. and Schwartz M. A. (2000) *Methods Enzymol.* **325**, 264-72.

### Recent Product Citations

1. Dong, R. et al. (2026). RhoA accelerates atherosclerosis progression by interacting with Hspa5. *Sci Rep.* doi: 10.1038/s41598-025-33741-w.
2. Alam, J. et al. (2014). N-acetylcysteine and the human serum components that inhibit bacterial invasion of gingival epithelial cells prevent experimental periodontitis in mice. *J Periodontal Implant Sci.* **44**:266-273.
3. Sabbatini, M. et al. (2008). Rap1 activation plays a regulatory role in pancreatic amylase secretion. *J. Biol. Chem.* **283**:23884-23894.
4. Sabbatini, M. E. et al. (2010). CCK activates RhoA and Rac1 differentially through G-alpha-13 and G-alpha-q in mouse pancreatic acini. *Am. J. Physiol. Cell Physiol.* **298**:C592-C605.

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