

# Cytoskeleton's Activation Assays



The Most Cited, the Most Trusted



The Original G-LISAs  
by **Cytoskeleton, Inc.**



# Activation Assays

## Cytoskeleton G-LISA® Small G-Protein Activation Assays

G-LISA Small GTPase Activation Assays offer a fast and sensitive method for measuring GTP-bound active small G-proteins. Cytoskeleton, Inc. was the original developer of these activation assay tools.

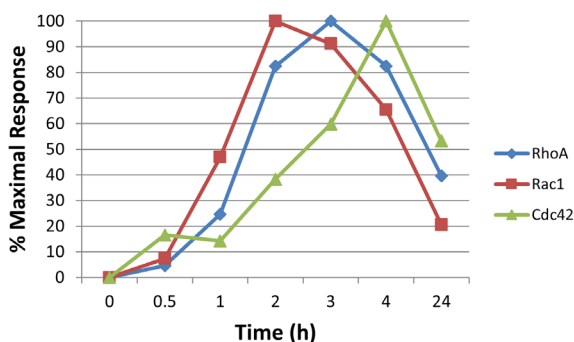
Advantages of G-LISA activation assays include:

- High Sensitivity and Accuracy
- Results in 3 Hours
- Flexible Format
- Small Amount of Material Required
- Compatible with Tissues and Cell Lysates
- Highly Cited Tools



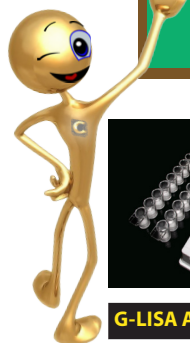
Cytoskeleton has created in-depth FAQs, Tech-Tips, Protocol Videos, and Technical Guides to provide expert guidance when utilizing G-LISA® Activation Assays for the first time. Find them at the link below.

<https://www.cytoskeleton.com/activation-assays>



Swiss 3T3 fibroblasts were treated with 1 µg/ml CN04 for the indicated times and cell lysates were subjected to G-LISA activation assays for RhoA (Cat.# BK124), Rac1 (Cat.# BK128), and Cdc42 (Cat.# BK127).

Hundreds of Citations Available at Cytoskeleton.com!



### G-LISA® Activation Assays

G-LISAs use a 96-well plate coated with effector protein that selectively binds the active GTPase followed by quantitation with ELISA techniques.

G-LISA Activation Assays	Cat. #	Amount
<b>RhoA/Rac1/Cdc42 G-LISA Activation Assay Bundle</b> BK135=BK124-S+BK127-S+BK128-S	BK135	3 Kits (24 assays/kit)
<b>Cdc42 G-LISA® Activation Assay, colorimetric</b>	BK127-S BK127	24 assays 96 assays
<b>Rac1,2,3 G-LISA® Activation Assay, colorimetric</b>	BK125	96 assays
<b>Rac1 G-LISA® Activation Assay, colorimetric</b>	BK128-S BK128	24 assays 96 assays
<b>Rac1 G-LISA® Activation Assay, luminescence</b>	BK126	96 assays
<b>RalA G-LISA® Activation Assay, colorimetric</b>	BK129	96 assays
<b>Ras G-LISA® Activation Assay, colorimetric</b>	BK131	96 assays
<b>RhoA G-LISA® Activation Assay, colorimetric</b>	BK124-S BK124	24 assays 96 assays
<b>RhoA G-LISA® Activation Assay, luminescence</b>	BK121	96 assays
<b>Protease Inhibitor Cocktail (100x stock)</b>	PIC02	1 ml

### G-LISA® Product Citations

#### RhoA G-LISA® (Cat. # BK124)

Choraghe R. et al. *J Cell Sci.* 2020 Mar 2;133(5):jcs.236166. doi: 10.1242/jcs.236166

#### Rac1 G-LISA® (Cat. # BK128)

Woida P. et al. *Sci Signal.* 2020 Jan 14;13(614):eaaw9447. doi: 10.1126/scisignal.aaw9447.

#### Cdc42 G-LISA® (Cat. # BK127)

Zhang X. et al. *JCI Insight.* 2020 Aug 20;5(16):e135923. doi: 10.1172/jci.insight.135923.

#### Ras G-LISA® (Cat. # BK131)

Hofmann M. et al. *Cancer Discov.* 2020 Aug 19;CD-20-0142. doi: 10.1158/2159-8290.CD-20-0142.

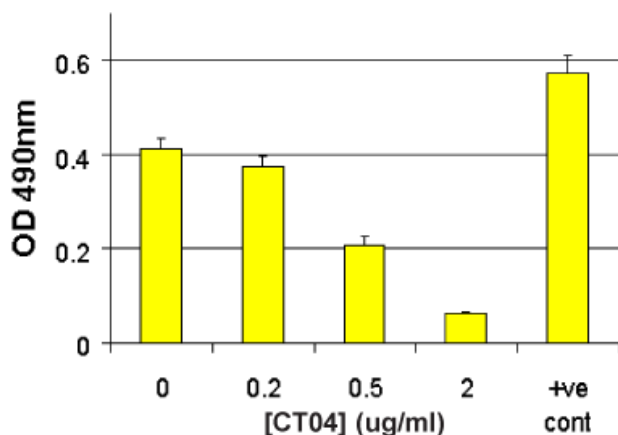
**More online!**

[www.cytoskeleton.com/activation-assays](http://www.cytoskeleton.com/activation-assays)



## Cytoskeleton G-Switch Small G-Protein Inhibitors

The G-switch line of inhibitors are state of the art reagents for studying the effects of small G-proteins in your field of research. The Rho and Ras family of small G-proteins are important in cell motility, cell morphology, cell division, cell growth and proliferation.



Rho activity measured in Swiss 3T3 cells treated with the Cell Permeable Rho Inhibitor (CT04) using the RhoA G-LISA Activation Assay (Cat.# BK124). Serum starved Swiss 3T3 fibroblasts were untreated (no CT04) or treated with 0.20, 0.50 and 2.0 µg/ml of CT04 for 4h in serum free medium at 37°C, then activated with 100µg/ml calpeptin for 10min. Cells were then lysed and RhoA activity was measured by the RhoA G-LISA Activation Assay (Cat.# BK124). Note: At 2.0 µg/ml CT04 for 4h results in almost complete (90%) inhibition of RhoA activity.



Popular G-Switch Inhibitors	Cat. #	Amount
<b>Rho Inhibitor I</b> Specific inhibitor of Rho activity, ADP ribosylation of Rho Asn-41 (very cell permeable)	CT04-A	1 x 20 µg
	CT04-B	5 x 20 µg
	CT04-C	20 x 20 µg
<b>C3 Transferase Protein</b> Specific inhibitor of Rho activity, ADP ribosylation of Rho Asn-41 (limited cell permeability)	CT03-A	1 x 25 µg
	CT03-C	4 x 25 µg

## Cytoskeleton Pull-down Activation Assays

Cytoskeleton offers Small G-Protein Pull-down Activation Assays. Cytoskeleton's Assays measure active forms of small g-proteins using a well-established approach without the need for any specialized equipment.



### Pull-down Activation Assays

Pull-down assays utilize affinity beads linked to an effector protein that selectively binds active GTPase followed by quantitation with Western blotting.

Pull-down Activation Assays	Cat. #	Amount
<b>Combo RhoA/Rac1/Cdc42 Activation Assay Biochem Kit™</b>	BK030	3 x 10 assays
<b>Arf1 Activation Assay Biochem Kit™</b>	BK032-S	20 assays
<b>Arf6 Activation Assay Biochem Kit™</b>	BK033-S	20 assays
<b>Cdc42 Activation Assay Biochem Kit™</b>	BK034-S BK034	20 assays 50 assays
<b>Rac1 Activation Assay Biochem Kit™</b>	BK035-S BK035	20 assays 50 assays
<b>RalA Activation Assay Biochem Kit™</b>	BK040	50 assays
<b>Ras Activation Assay Biochem Kit™</b>	BK008-S BK008	20 assays 50 assays
<b>RhoA Activation Assay Biochem Kit™</b>	BK036-S BK036	20 assays 80 assays

### Activation Assay Video



Learn which assay format is right for you.  
[www.cytoskeleton.com/activationassayvideo](http://www.cytoskeleton.com/activationassayvideo)

### Comparison of Pull-down and G-LISA formats

Parameter	Pull-down	G-LISA®
<b>Total protein per assay</b>	500-2000 µg	10-50 µg
<b>Assay time</b>	10-12 h (2 days)	<3 h
<b>Primary cells &amp; 3D matrix compatible</b>	No	Yes
<b>Sample handling</b>	10 Samples	96 Samples
<b>Quantitative data*</b>	Semi	Yes

\* Numerical readouts and fewer sample handling steps make G-LISA® assays more quantitative.



## Ordering information for USA and Canada:

Online - [cytoskeleton.com](http://cytoskeleton.com)

Phone - 303.322.2254

Fax - 303.322.2257

## Cytoskeleton, Inc.

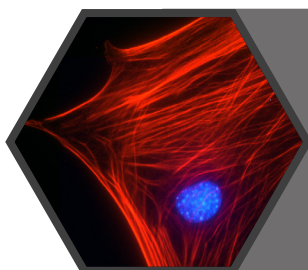
1830 S. Acoma St.,

Denver, CO 80223, USA.

## International Customers

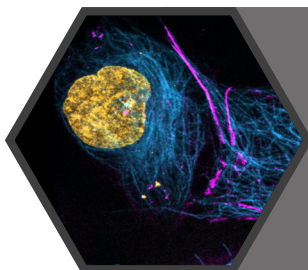
Locate your nearest distributor at:

[cytoskeleton.com/distributors](http://cytoskeleton.com/distributors)



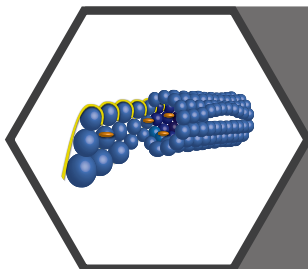
## Actin Tools

- Acti-Stain Phalloidins
- Ultra Pure Actin Proteins
- New Pan-Actin Antibody



## Live Cell Imaging Tools

- Spirochrome: Actin, DNA, and Tubulin Tools
- New MemGlow™ Fluorogenic Probes
- New Mechanosensory Probes and SPY-BG Dyes



## Tubulin Tools

- Tubulin Polymerization Assays
- Tubulin Binding Assays
- Labeled and Unlabeled Tubulin Proteins