Revision 1

#3881 Store at -20C

# Phospho-Gab2 (Tyr452) Antibody

Cell Signaling TECHNOLOGY®

**Orders:** 877-616-CELL (2355) orders@cellsignal.com

**Support:** 877-678-TECH (8324)

**Web:** info@cellsignal.com cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

**For Research Use Only. Not for Use in Diagnostic Procedures.**

| Applications: | Reactivity: | Sensitivity: | MW (kDa): | Source/Isotype: | UniProt ID: | Entrez-Gene Id: |
|---|---|---|---|---|---|---|
| W | H M R | Endogenous | 98 | Rabbit | #Q9UQC2 | 9846 |

## Product Usage Information

| Application | Dilution |
|---|---|
| Western Blotting | 1:1000 |

## Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

## Specificity/Sensitivity

Phospho-Gab2 (Tyr452) Antibody detects endogenous levels of Gab2 only when phosphorylated at tyrosine 452. This antibody cross-reacts with phosphorylated Gab1 and Gab3.

## Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr452 of human Gab2. Antibodies are purified by protein A and peptide affinity chromatography.

## Background

The Grb-associated binder (Gab) family is a family of adaptor proteins recruited by a wide variety of receptor tyrosine kinases (RTKs) such as EGFR, HGFR, insulin receptor, cytokine receptor and B cell antigen receptors. Upon stimulation of RTKs by their cognate ligand, Gab is recruited to the plasma membrane where it is phosphorylated and functions as a scaffold (1-4). Multiple tyrosine phosphorylation sites of Gab1 protein have been identified (5). Phosphorylation of Tyr472 regulates its binding to p85 PI3 kinase (6,7). Phosphorylation of Gab1 at Tyr307, Tyr373 and Tyr407 modulates its association to PLCγ (8). Phosphorylation of Tyr627 and Tyr659 is required for Gab1 binding to and activation of the protein tyrosine phosphatase SHP2 (6,9).
Gab2 is also phosphorylated by tyrosine kinases (10,11). Tyr452 is a potential binding site of p85, the regulatory subunit of PI3 kinase. Tyr614 is essential for SHP2 association (11). Furthermore, Akt phosphorylates Gab2 at Ser159 and inhibits Gab2 tyrosine phosphorylation, suggesting that Akt is engaged in negative feedback regulation of Gab2 signaling (12).

## Background References

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5. Lehr, S. et al. (1999) *Biochemistry* 38, 151-159.
6. Rocchi, S. et al. (1998) *Mol. Endocrinol.* 12, 914-923.
7. Yu, C.F. et al. (2001) *J Biol Chem* 276, 32552-8.
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11. Yamasaki, S. et al. (2001) *J Biol Chem* 276, 45175-83.
12. Lynch, D.K. and Daly, R.J. (2002) *EMBO J* 21, 72-82.

## Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

## Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

## Applications Key

**W:** Western Blotting

## Cross-Reactivity Key

**H:** Human **M:** Mouse **R:** Rat

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