

# Phospho-Gab2 (Tyr452) Antibody

✓ 100 µl  
(10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID #9846  
Swiss-Prot Acc. #Q9UQC2

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	H, M, R	98 kDa	Rabbit**

**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, undergoes phosphorylation and functions as a multiprotein assembly center (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).

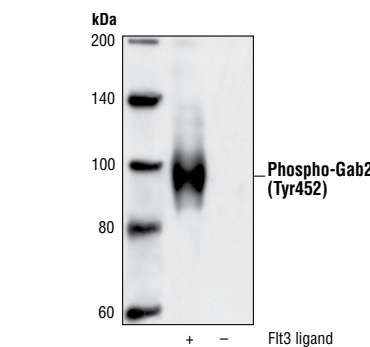
Gab2 is also phosphorylated by tyrosine kinases (10,11). Tyr452 is a potential binding site of p85, the regulatory subunit of PI3 kinase. Tyr614 is essential for SHP2 association (11). Furthermore, Akt phosphorylates Gab2 at Ser159 and inhibits Gab2 tyrosine phosphorylation, suggesting that Akt is engaged in negative feedback regulation of Gab2 signaling (12).

**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 References:**

- Holgado-Madruga, M. et al. (1996) *Nature* 379, 560-564.
- Weidner, K.M. et al. (1996) *Nature* 384, 173-176.
- Takahashi-Tezuka, M. et al. (1998) *Mol. Cell. Biol.* 18, 4109-4117.
- Ingham, R.J. et al. (2001) *J. Biol. Chem.* 276, 12257-12265.
- Lehr, S. et al. (1999) *Biochemistry* 38, 151-159.
- Rocchi, S. et al. (1998) *Mol. Endocrinol.* 12, 914-923.



Western blot analysis of extracts from BaF3 cells, untreated or treated with Fit3 ligand using Phospho-Gab2 (Tyr452) Antibody.

- Yu, C.F. et al. (2001) *J. Biol. Chem.* 276, 32552-32558.
- Gual, P. et al. (2000) *Oncogene* 19, 1509-1518.
- Cunnick, J.M. et al. (2001) *J. Biol. Chem.* 276, 24380-24387.
- Gadina, M. et al. (2000) *J. Biol. Chem.* 275, 26959-26966.
- Yamasaki, S. et al. (2001) *J. Biol. Chem.* 276, 45175-45183.
- Lynch, D.K. and Daly, R.J. (2002) *EMBO J.* 21, 72-82.

**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.

\*Species cross-reactivity is determined by western blot.

\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.

**Recommended Antibody Dilutions:**

Western Blotting 1:1000

For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).

Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.

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

**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide  
**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine  
Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.