

Store at  
-20°C  
#11817

# Phospho-GRB10 (Ser476) (D4E6) Rabbit mAb

100 µl (10 western blots)

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Support: 877-678-TECH (8324)  
info@cellsignal.com

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Entrez-Gene ID #2887  
UniProt ID #Q13322

rev. 06/09/14

For Research Use Only. Not For Use In Diagnostic Procedures.

Applications  
W, IP  
Endogenous

Species Cross-Reactivity\*  
H, M, (R)

Molecular Wt.  
80 kDa

Isotype  
Rabbit IgG\*\*

**Background:** The GRB7 family of adaptor proteins consist of GRB7, GRB10 and GRB14, which all contain an amino-terminal proline-rich SH3 binding domain, followed by PH, PBS, and SH2 domains. Each member of the family has several splice variants (1). It has been reported that GRB10 interacts with many receptor tyrosine kinases (RTKs) as well as downstream signal molecules including Raf, Akt, and Nedd4 (1,2). Although it was originally thought that GRB10 is exclusively phosphorylated at serine residues (3), Src kinase family members have been shown to phosphorylate GRB10 at Tyr67 (4).

Recently GRB10 was shown to be a direct substrate of mTORC1 (5). It is phosphorylated by mTORC1 at Ser150, Ser428, and Ser476 upon insulin stimulation (5).

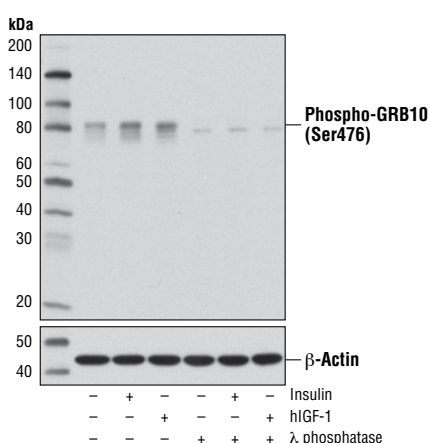
**Specificity/Sensitivity:** Phospho-GRB10 (Ser476) (D4E6) Rabbit mAb recognizes endogenous levels of GRB10 protein only when phosphorylated at Ser476.

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser476 of human GRB10 protein.

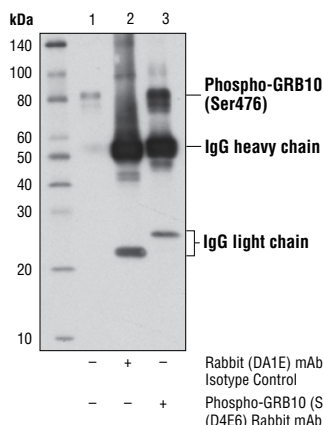
## Background References:

- (1) Han, D. C. et al. (2001) *Oncogene* 20, 6315-6321.
- (2) Jahn, T. et al. (2002) *Mol. Cell. Biol.* 22, 979-991.
- (3) Ooi, J. et al. (1995) *Oncogene* 10, 1621-1630.
- (4) Langlais, P. et al. (2000) *Oncogene* 19, 2895-2903.
- (5) Hsu, P.P. et al. (2011) *Science* 332, 1317-22.

Immunoprecipitation of phospho-GRB10 (Ser476) from extracts of serum starved NIH/3T3 cells treated with insulin (100 nM, 5 min), using Rabbit (DA1E) mAb IgG XP® Isotype Control #3900 (lane 2) or Phospho-GRB10 (Ser476) (D4E6) Rabbit mAb (lane 3). Lane 1 is 10% input. Western blot analysis was performed using Phospho-GRB10 (Ser476) (D4E6) Rabbit mAb.



Western blot analysis of extracts from serum starved NIH/3T3 cells, untreated or treated with insulin (100 nM, 5 min), hIGF-1 #8917 (100 ng/ml, 5 min), or  $\lambda$  phosphatase, using Phospho-GRB10 (Ser476) (D4E6) Rabbit mAb (upper) or  $\beta$ -Actin (D6A8) Rabbit mAb #8457 (lower).



**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. 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
Immunoprecipitation	1:50

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**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.**

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide Species Cross-Reactivity: 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.