

#3818 Store at -20°C

# GFAT1 Antibody



✓ 100 µl  
(10 western blots)

**Orders** ■ 877-616-CELL (2355)  
orders@cellsignal.com  
**Support** ■ 877-678-TECH (8324)  
info@cellsignal.com  
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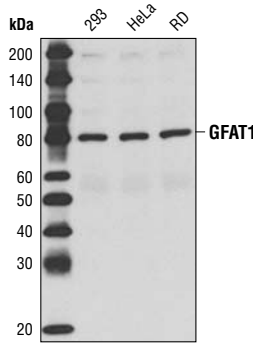
New 08/09

This product is for *in vitro* research use only and is not intended for use in humans or animals.  
This product is not intended for use as a therapeutic or in diagnostic procedures.

Entrez-Gene ID #2673  
Swiss-Prot Acc. #Q06210

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP Endogenous	H	80 kDa	Rabbit**

**Background:** GFAT1, glutamine:fructose-6-phosphate aminotransferase 1, is the rate-limiting enzyme of the hexosamine biosynthesis pathway (1). This enzyme catalyses the conversion of fructose-6-phosphate and glutamine to glucosamine-6-phosphate and glutamate (2). The hexosamine biosynthesis pathway generates the building blocks for protein and lipid glycosylation (2). Furthermore, studies suggest that increased activity of this pathway is a contributing factor to hyperglycemia-induced insulin resistance (1,2). GFAT1 is more active in non-insulin-dependent diabetes mellitus (NIDDM) patients (3). Transgenic mice overexpressing this enzyme in skeletal muscle and adipose tissue show an insulin resistance phenotype (4,5).



Western blot analysis of extracts from various cell lines using GFAT1 Antibody.

**Specificity/Sensitivity:** GFAT1 Antibody detects endogenous levels of total GFAT1 protein.

**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic peptide (KLH-coupled) corresponding to the sequence of human GFAT1. Antibodies are purified by protein A and peptide affinity chromatography.

### Background References:

- (1) Niimi, M. et al. (2001) *J Hum Genet* 46, 566–71.
- (2) DeHaven, J.E. et al. (2001) *Diabetes* 50, 2419–24.
- (3) Yki-Järvinen, H. et al. (1999) *Life Sci* 65, 215–23.
- (4) Cooksey, R.C. et al. (1999) *Endocrinology* 140, 1151–7.
- (5) Hebert, L.F. et al. (1996) *J Clin Invest* 98, 930–6.

**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
Immunoprecipitation	1:50

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 All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.