Revision 1

Store at -20C

#41019

MAFB 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, IP	H	Endogenous	46, 48	Rabbit	#Q9Y5Q3	9935

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50

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

MAFB Antibody recognizes endogenous levels of total MAFB protein. Based on sequence similarity, this antibody is not predicted to cross-react with MAFA.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding of human Pro188 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

MAFB belongs to the musculoaponeurotic fibrosarcoma (MAF) family of basic leucine-zipper transcription factors (1). In mouse embryo, MAFB expression is first detected at E10.5 (2,3). Early in development, MAFB drives differentiation of both glucagon-producing α-cells and insulin-producing β-cells in the pancreas, but later plays a more decisive role in the maturation and maintenance of functional α-cells (4,5). Consistent with MAFB playing a critical role in mature α-cells, MAFB is enriched in α-cells within two weeks of birth in the pancreas (6). Glucagon and insulin secretion is tightly regulated, and imbalances in these hormones contribute to metabolic conditions. Therefore, understanding the role of MAFB in α-cell development, maintenance, and physiological function may contribute to developing deeper insights into how these cells contribute to metabolic diseases like diabetes. MAFB also regulates monocyte differentiation, indicating MAFB functions beyond the pancreas (7).

Background References

1. Hang, Y. and Stein, R. (2011) *Trends Endocrinol Metab* 22, 364-73.
2. Nishimura, W. et al. (2006) *Dev Biol* 293, 526-39.
3. Artner, I. et al. (2006) *Diabetes* 55, 297-304.
4. Katoh, M.C. et al. (2018) *Mol Cell Biol* 38, e00504-17.
5. Artner, I. et al. (2007) *Proc Natl Acad Sci U S A* 104, 3853-8.
6. Artner, I. et al. (2010) *Diabetes* 59, 2530-9.
7. Wu, X. et al. (2016) *J Exp Med* 213, 2553-65.

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 **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human

Trademarks and Patents

Limited Uses

force or effect.

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