

**Integrin  $\beta$ 8 (D1V7M) Rabbit mAb**

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	M	Endogenous	98	Rabbit IgG	#Q0VBD0	320910

**Product Usage Information****Application**

Western Blotting

**Dilution**

1:1000

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100  $\mu$ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at  $-20^{\circ}\text{C}$ . Do not aliquot the antibody.

**Specificity/Sensitivity**

Integrin  $\beta$ 8 (D1V7M) Rabbit mAb recognizes endogenous levels of total integrin  $\beta$ 8 protein.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with recombinant mouse integrin  $\beta$ 8 protein.

**Background**

Integrin  $\alpha$ v $\beta$ 8 facilitates activation and release of TGF- $\beta$ , which has immunosuppressive effects (1). Deletion of integrin  $\beta$ 8 from dendritic cells led to development of inflammatory bowel disease and autoimmunity in mice, as well as failure to induce regulatory T cells that require TGF- $\beta$  for development (2). TGF- $\beta$  is also involved in Th17 cell differentiation. Mice lacking expression of integrin  $\beta$ 8 on dendritic cells fail to develop Th17 cells and are protected from Th17-mediated autoimmune disease (3). Regulatory T cells express high levels of integrin  $\alpha$ v $\beta$ 8, which enables them to suppress pathogenic T cell activation by activating latent TGF- $\beta$  (4). Integrin  $\beta$ 8 is also essential for vascular morphogenesis as integrin  $\beta$ 8-deficient mice are embryonic or perinatal lethal and exhibit insufficient and abnormal vascular morphogenesis (5).

**Background References**

1. Mu, D. et al. (2002) *J Cell Biol* 157, 493-507.
2. Travis, M.A. et al. (2007) *Nature* 449, 361-5.
3. Melton, A.C. et al. (2010) *J Clin Invest* 120, 4436-44.
4. Worthington, J.J. et al. (2015) *Immunity* 42, 903-15.
5. Zhu, J. et al. (2002) *Development* 129, 2891-903.

**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  $4^{\circ}\text{C}$  with gentle shaking, overnight.

**Applications Key**

**W:** Western Blotting

**Cross-Reactivity Key**

**M:** Mouse

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