

**#4600** Store at -20°C

# Integrin $\alpha 4$ Antibody


**Cell Signaling**  
TECHNOLOGY®

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, IP	H	Endogenous	70, 140, 150, (180)	Rabbit	#P13612	3676

## Product Usage Information

### Application

Western Blotting  
Immunoprecipitation

### Dilution

1:1000  
1:100

## Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100  $\mu$ g/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

## Specificity / Sensitivity

Integrin  $\alpha 4$  Antibody detects endogenous levels of integrin  $\alpha 4$  mature protein (150kDa),  $\alpha 4$  precursor protein (140kDa), as well as 70 kDa cleaved C-terminal  $\alpha 4$  fragment.

## Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ser1027 of human integrin  $\alpha 4$ . Antibodies are purified by peptide affinity chromatography.

## Background

Integrins are  $\alpha/\beta$  heterodimeric cell surface receptors that play a pivotal role in cell adhesion and migration, as well as in growth and survival (1,2). The integrin family contains at least 18  $\alpha$  and 8  $\beta$  subunits that form 24 known integrins with distinct tissue distribution and overlapping ligand specificities (3). Integrins not only transmit signals to cells in response to the extracellular environment (outside-in signaling), but also sense intracellular cues to alter their interaction with the extracellular environment (inside-out signaling) (1,2). A pair of important  $\alpha 4$  integrins,  $\alpha 4\beta 1$  and  $\alpha 4\beta 7$ , interact with VCAM-1, fibronectin, and MAdCAM-1 at cell adhesions (3). Gene knockout and antibody blocking research reveal that  $\alpha 4$  integrins play important roles in embryonic liver and heart development and in fetal lymphocyte homing (4-6). Phosphorylation at Ser988 within the cytoplasmic tail of integrin  $\alpha 4$  blocks binding to paxillin and promotes leading edge migration (7,8). On SDS-PAGE, integrin  $\alpha 4$  can migrate at several different apparent molecular sizes, a 150 kDa mature protein and a 140 kDa precursor protein (a 180 kDa protein also exists under mild non-reducing conditions) (9). Integrin  $\alpha 4$  has a cleavage site at Arg558, which results in a small portion of the protein as either an 80 kDa N-terminal or 70 kDa C-terminal fragment (10).

## Background References

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## 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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

## Applications Key

**WB:** Western Blotting **IP:** Immunoprecipitation

**Cross-Reactivity Key**

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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  
**GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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