Revision 4

Store at -20C

#86781

CD133 (D4W4N) XP® Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IHC-Bond, IHC-P	H	Endogenous	133	Rabbit IgG	#O43490	8842

Product Usage Information

Application	Dilution
Western Blotting	1:1000
IHC Leica Bond	1:700
Immunohistochemistry (Paraffin)	1:700

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.

For a carrier free (BSA and azide free) version of this product see product #69914.

Specificity/Sensitivity

CD133 (D4W4N) XP® Rabbit mAb recognizes endogenous levels of total CD133 protein. The antibody is not sensitive to the glycosylation status of CD133.

Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant protein corresponding to the first extracellular domain of human CD133 protein. The epitope has been mapped to a region spanning amino acid residues 257-281, which includes a single N-linked glycosylation site (Asn274).

Background

CD133, also known as Prominin, was first described as a cell surface marker recognized by monoclonal antibody AC133 on putative hematopoietic stem cells (1). Subsequent cDNA cloning indicated that CD133 is a five-transmembrane protein with a predicted molecular weight of 97 kDa. Due to heavy glycosylation, its apparent molecular weight is 130 kDa as determined by SDS-PAGE analysis (2). Besides blood stem cells, CD133 is expressed on and used to isolate other stem cells, including cancer stem cells (3-7). A deletion mutation in CD133 produces aberrant protein localization and may result in retinal degeneration in humans (8).

Background References

1. Yin, A.H. et al. (1997) *Blood* 90, 5002-12.
2. Miraglia, S. et al. (1997) *Blood* 90, 5013-21.
3. Handgretinger, R. et al. (2003) *Ann N Y Acad Sci* 996, 141-51.
4. Monzani, E. et al. (2007) *Eur J Cancer* 43, 935-46.
5. O'Brien, C.A. et al. (2007) *Nature* 445, 106-10.
6. Ricci-Vitiani, L. et al. (2007) *Nature* 445, 111-5.
7. Singh, S.K. et al. (2004) *Nature* 432, 396-401.
8. Maw, M.A. et al. (2000) *Hum. Mol. Genet.* 9, 27-34.

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

W: Western Blotting **IHC-Bond:** IHC Leica Bond **IHC-P:** Immunohistochemistry (Paraffin)

Cross-Reactivity Key

H: Human

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Limited Uses

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