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KREMEN1 Antibody

Catalog # ASC11626

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q96MU8
Other Accession	NP_114434, 24041012
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	51744
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	KREMEN1 antibody can be used for detection of KREMEN1 by Western blot at 0.125 - 0.25 □g/mL.

Additional Information

Gene ID	83999
Other Names	Kremen protein 1, Dickkopf receptor, Kringle domain-containing transmembrane protein 1, Kringle-containing protein marking the eye and the nose, KREMEN1, KREMEN, KRM1
Target/Specificity	KREMEN1; Three isoforms of KREMEN1 exists as a result of alternative splicing event.
Reconstitution & Storage	KREMEN1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	KREMEN1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	KREMEN1
Synonyms	KREMEN, KRM1
Function	Receptor for Dickkopf proteins. Cooperates with DKK1/2 to inhibit Wnt/beta-catenin signaling by promoting the endocytosis of Wnt receptors LRP5 and LRP6. In the absence of DKK1, potentiates Wnt-beta- catenin signaling by maintaining LRP5 or LRP6 at the cell membrane. Can trigger apoptosis in a Wnt-independent manner and this apoptotic activity is inhibited upon binding of the ligand DKK1. Plays a role in limb development; attenuates Wnt signaling in the developing limb to allow normal limb patterning and can also negatively regulate bone formation. Modulates cell

	fate decisions in the developing cochlea with an inhibitory role in hair cell fate specification.
Cellular Location	Cell membrane {ECO:0000250|UniProtKB:Q99N43}; Single-pass type I membrane protein

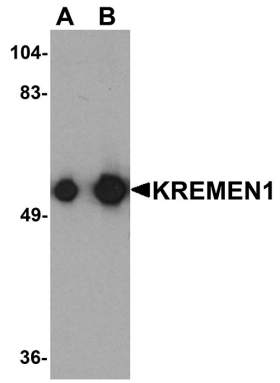
Background

KREMEN1 Antibody: Kremen (Kringle containing protein marking the eye and the nose) proteins are type I transmembrane proteins that contain extracellular kringle, WSC and CUB domains and an intracellular region without any conserved motifs. Kremens bind a subset of the secreted Dickkopf proteins (Dkk 1, 2, and 4) with high affinity to modulate the canonical Wnt signaling pathway that is transduced by the ternary receptor complex composed of Wnt, Frizzled, and the LDL receptor related protein 5/6 (LRP5/6) coreceptor. KREMEN1 is a receptor for the Dickkopf protein which blocks Wnt/beta catenin signaling. It is necessary to ensure normal spatial and temporal patterns of Wnt activity during developmental processes.

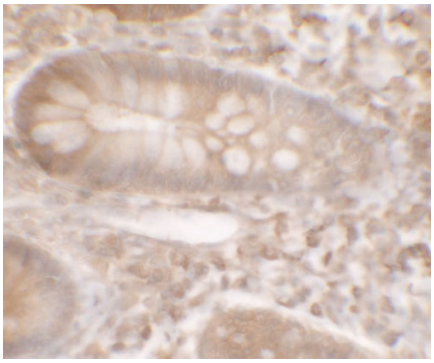
References

Nakamura T, Aoki S, Kitajima K, et al. Molecular cloning and characterization of Kremen, a novel kringle-containing transmembrane protein. Biochim. Biophys. Acta. 2001; 1518:63-72.
Mao B, Wu W, Davidson G, et al. Kremen proteins are Dickkopf receptors that regulate Wnt/beta-catenin signalling. Nature 2002; 417:664-7.
Li J, Liu WM, Cao YJ, et al. Roles of Dickkopf-1 and its receptor Kremen1 during embryonic implantation in mice. Fertil. Steril. 2008; 90:1470-9.
Wang K, Zhang Y, Li X, et al. Characterization of the Kremen-binding site on Dkk1 and elucidation of the role of Kremen in Dkk-mediated Wnt antagonism. J. Biol. Chem. 2008; 283:23371-5.

Images

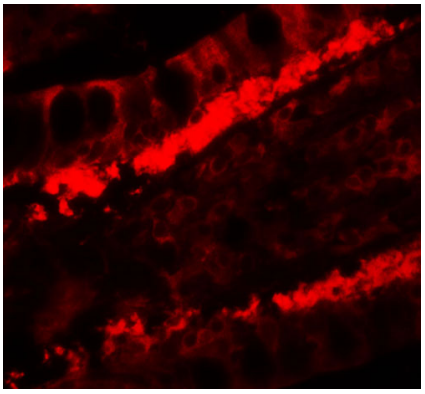


Western blot analysis of KREMEN1 in rat small intestine tissue lysate with KREMEN1 antibody at (A) 0.125 and (B) 0.25 µg/mL



Immunohistochemistry of KREMEN1 in human small intestine tissue with KREMEN1 antibody at 5 µg/ml.

Immunofluorescence of KREMEN1 in human small intestine tissue with KREMEN1 antibody at 20 µg/ml.



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