Product Information Sheet

Polyclonal Anti- Gremlin 1

Catalogue No. PA1319

Lot No. 09J01

Ig type rabbit IgG

Size 100µg/vial

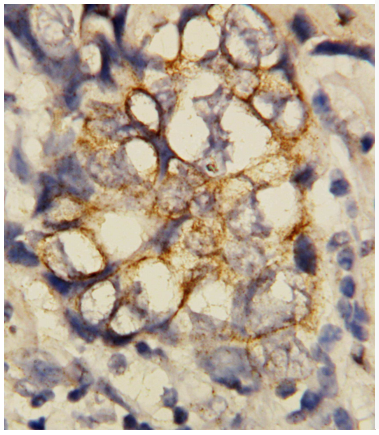
Specificity

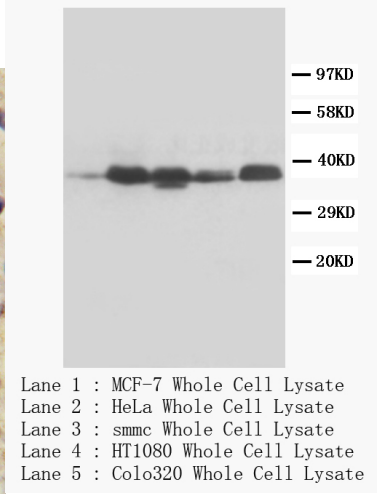
Human,rat,mouse,rabbit(cartilage). No cross reactivity with other proteins.

Recommended application

Western blot

Immunohistochemistry (P)





Lane 1 : MCF-7 Whole Cell Lysate
Lane 2 : HeLa Whole Cell Lysate
Lane 3 : smmc Whole Cell Lysate
Lane 4 : HT1080 Whole Cell Lysate
Lane 5 : Colo320 Whole Cell Lysate

Immunogen

A synthetic peptide corresponding to a sequence at the C-terminal of human Gremlin 1, identical to the related rat and mouse sequence.

Purity

Immunogen affinity purified.

Application

	Concen-tration	Tested Species	Concluded Species	Antigen Retrieval
WB	1µg/ml	Hu, Rat	Ms	-
IHC-P	1µg/ml	Rabbit, Hu	-	By Heat
IHC-F	-	-	-	-
ICC	-	-	-	-

Other applications have not been tested.

Optimal dilutions should be determined by end user.

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na_2HPO_4, 0.05mg Thimerosal, 0.05mg NaN_3.

Reconstitution

0.2ml of distilled water will yield a concentration of 500µg/ml.

Storage

At -20˚C for one year. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for longer time.

To reorder contact us at:

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BACKGROUND

Gremlin, also known as Drm, is a highly conserved 20.7-kDa, 184 amino acid glycoprotein part of the DAN family and is a cysteine knot-secreted protein.[1,2] Skeletal cells synthesize bone morphogenetic proteins (BMPs) and BMP antagonists. And Gremlin is expressed in osteoblasts and opposes BMP effects on osteoblastic differentiation and function in vitro. Gremlin 1 (GREM 1) is known for its antagonistic reaction with BMPs in the TGF beta signaling pathway. This gene inhibits BMP-2, BMP-4, and BMP-7. Inhibition by grem 1 of BMPs in mice allow the expression of fibroblast growth factors (FGFs) 4 and 8 and Sonic hedgehog (SHH) which are necessary for proper limb development.[3] Gremlin 1 may play an oncogenic role especially in carcinomas of the uterine cervix, lung, ovary, kidney, breast, colon, pancreas, and sarcoma. Over-expressed gremlin 1 functions by interaction with YWHAH(Its binding site for gremlin 1 was located between residues 61-80 and gremlin 1 binding site for YWHAH was found to be located between residues 1-67). Therefore, Gremlin 1 and its binding protein YWHAH could be good targets for developing diagnostic and therapeutic strategies against human cancers.[4]

REFERENCE

1. Gazzero E, Pereira RC, Jorgetti V, Olson S, Economides AN, Canalis E (2005). "Skeletal overexpression of gremlin impairs bone formation and causes osteopenia". Endocrinology 142(2):655-665.
2. Stabile H, Mitola S, Moroni E, Belleri M, Nicoli S, Coltrini D, Peri F, Pessi A, Orsatti L, Talamo F (2007). Blood 109(5):1834-1840.
3. Gazzero E, Pereira RC, Jorgetti V, Olson S, Economides AN, Canalis E (2005). "Skeletal overexpression of gremlin impairs bone formation and causes osteopenia". Endocrinology 142(2), 146(2):655-665.
4. Namkoong H, Shin SM, Kim HK, Ha S, Cho GW, Hur SY, Kim TE, Kim JW (2006). "The bone morphognentic protein antagonist gremlin 1 is overespressed in human cancers and interacts with YWAHAH protein". BMC cancer 6:74.