For Research Use Only

BMP7 Polyclonal antibody

Catalog Number:12221-1-AP Featured Product 18 Publications

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Basic Information

Catalog Number:
12221-1-AP

Size:
600 μg/ml

Source:
Rabbit

Isotype:
IgG

Immunogen Catalog Number:
AG2902

GenBank Accession Number:
BC008584

GeneID (NCBI):
655

UNIPROT ID:
P18075

Full Name:
bone morphogenetic protein 7

Calculated MW:
431 aa, 49 kDa

Observed MW:
43-49 kDa

Purification Method:
Antigen affinity purification

Recommended Dilutions:
WB 1:500-1:2000
IP 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate
IHC 1:50-1:500
IF 1:50-1:500

Applications

Tested Applications:
IF/ICC, IHC, IP, WB, ELISA

Cited Applications:
IF, IHC, WB

Species Specificity:
human, mouse

Cited Species:
human, rat

Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0

Positive Controls:

WB : MCF-7 cells, HEK-293 cells

IP : HEK-293 cells,

IHC : mouse brain tissue, human kidney tissue, human renal cell carcinoma tissue, human bladder tissue

IF : HeLa cells,

Background Information

The bone morphogenetic proteins (BMPs) are a family of secreted signaling molecules that can induce ectopic bone growth. Many BMPs are part of the transforming growth factor-beta (TGFB) superfamily. BMPs were originally identified by an ability of demineralized bone extract to induce endochondral osteogenesis in vivo in an extraskeletal site.

BMP7, also known as osteogenic protein-1 or OP-1, plays a key role in the transformation of mesenchymal cells into bone and cartilage. BMP7 may be involved in bone homeostasis (PMID: 15621726). It is expressed in the brain, kidneys and bladder. BMP7 is also present in cancers, including breast, prostate, and colon cancers, in which it is implicated in regulating cancer cell proliferation (PMID: 16419056, PMID: 15531927). Overexpression of BMP7 mRNA in colorectal cancer patients was significantly associated with poor prognosis and low overall survival (PMID: 18259822). Recent studies suggest that high-expression level of BMP7 serves as a biomarker for poor prognosis for HCC (PMID: 23179403).

Notable Publications

Author	Pubmed ID	Journal	Application
Chia Yee Tan	31495264	Circ Res	WB
Lingling Liu	31655195	Life Sci	WB
Tianda Chen	27752241	Front Mol Neurosci	WB

Storage

Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

For technical support and original validation data for this product please contact:
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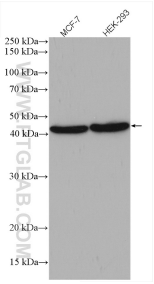
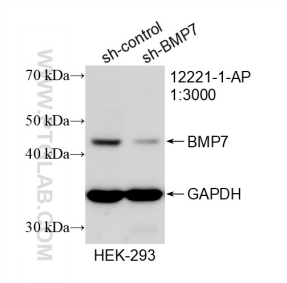
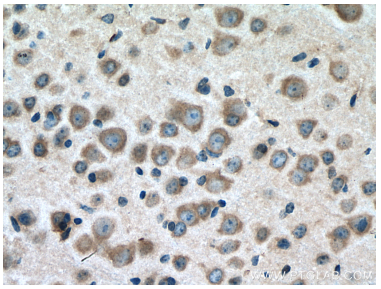
Selected Validation Data



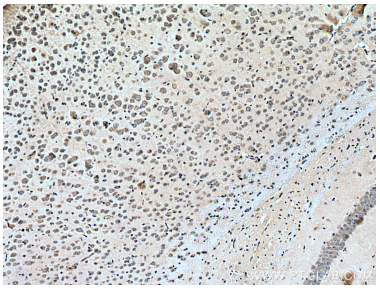
Various lysates were subjected to SDS PAGE followed by western blot with 12221-1-AP (BMP7 antibody) at dilution of 1:1000 incubated at room temperature for 1.5 hours.



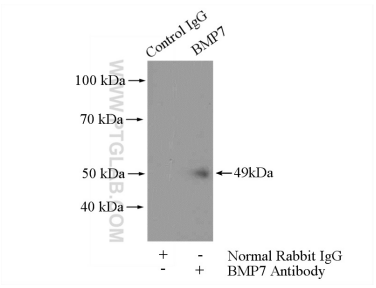
WB result of BMP7 antibody (12221-1-AP; 1:3000; incubated at room temperature for 1.5 hours) with sh-Control and sh-BMP7 transfected HEK-293 cells.



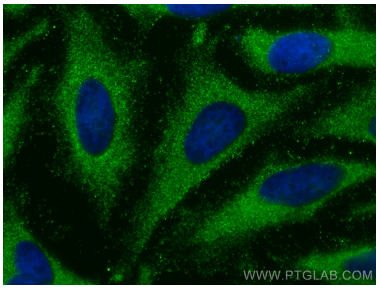
Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 12221-1-AP (BMP7 antibody) at dilution of 1:200 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 12221-1-AP (BMP7 antibody) at dilution of 1:200 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



IP result of anti-BMP7 (IP:12221-1-AP, 4ug; Detection:12221-1-AP 1:800) with HEK-293 cells lysate 2800ug.



Immunofluorescent analysis of (-20°C Methanol) fixed HeLa cells using BMP7 antibody (12221-1-AP) at dilution of 1:200 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L).