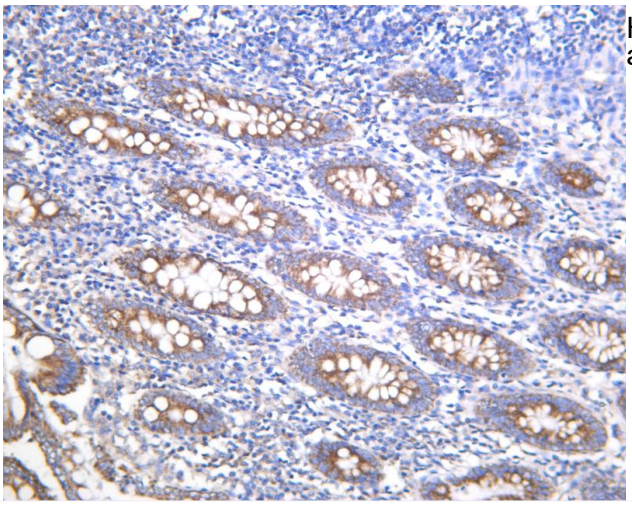
BMP-4 Rabbit mAb

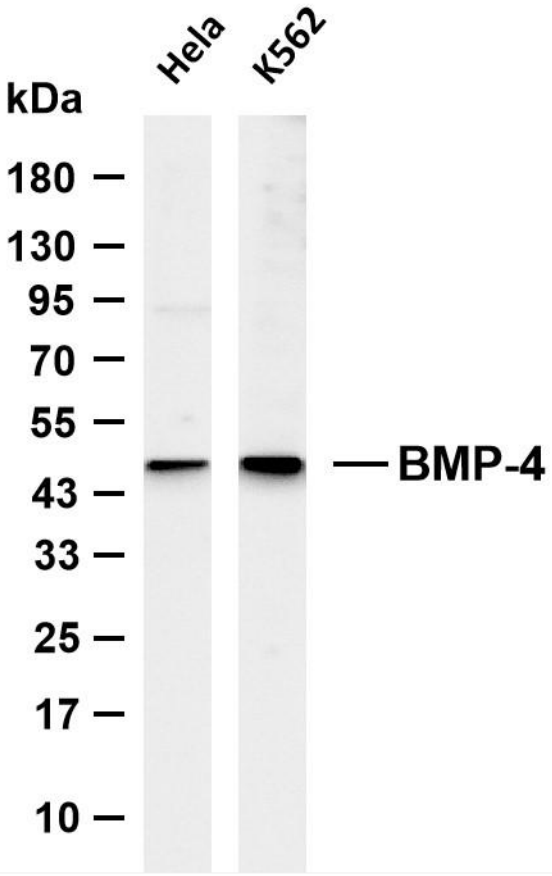
Catalog No	YP-rAb-17313
Isotype	IgG
Reactivity	Human
Applications	WB,IHC,IF,IP,ELISA
Gene Name	BMP4 BMP2B DVR4
Protein Name	Bone morphogenetic protein 4
Purification Process	Protein A
Specificity	Endogenous
Formulation	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
Source	Monoclonal, Rabbit,IgG
Dilution	IHC 1:200-1:1000; WB 1:2000-1:10000; IF 1:200-1:1000; ELISA 1:5000-1:20000; IP 1:50-1:200; Note: For IHC, we suggest antigen retrieval with TE buffer pH 9.0
Concentration	0.5 mg/ml
Purity	≥90%
Storage Stability	-15° C to -25° C/1 year(Do not lower than -25° C)
Synonyms	BMP4 ; BMP2B ; DVR4 ; Bone morphogenetic protein 4 ; BMP-4 ; Bone morphogenetic protein 2B ; BMP-2B
Observed Band	47kD
Calculated Molecular Weight	47kD
Cell Pathway	Secreted, extracellular space, extracellular matrix.
Tissue Specificity	Expressed in the lung and lower levels seen in the kidney. Present also in normal and neoplastic prostate tissues, and prostate cancer cell lines.
Function	skeletal system development, ossification, angiogenesis, ovarian follicle development, blood vessel development,osteoblast differentiation, eye development, urogenital system development, metanephros development, ureteric bud development, branching involved in ureteric bud morphogenesis, formation of primary germ layer, mesoderm formation, cell fate specification, cell fate determination, mesodermal cell fate commitment, induction of an organ,morphogenesis of a branching structure, kidney development, regulation of protein amino acid phosphorylation,positive regulation of protein amino acid phosphorylation, vasculature development, morphogenesis of an epithelium,lens development in camera-type eye, lens morphogenesis in camera-type eye, immune system development,regionalization, reproductive developmental process, regulation of transcription, DNA-dependent, regulation of transcription

from RNA polymerase II promoter, cell surface receptor linked signal transduction, enzyme linked receptor protein signaling pathway, transmembrane receptor protein serine/threonine kinase signaling pathway, cell-cell signaling, gamete generation, germ cell development, gastrulation, pattern specification process, sensory organ development, mesoderm development, mesodermal cell fate determination, heart development, sex differentiation,response to nutrient, cell proliferation, positive regulation of cell proliferation, negative regulation of cell proliferation,gonad development, female gonad development, response to mechanical stimulus, response to abiotic stimulus,response to endogenous stimulus, response to hormone stimulus, post-embryonic development, embryonic development ending in birth or egg hatching, positive regulation of biosynthetic process, dorsal/ventral pattern formation, positive regulation of signal transduction, response to extracellular stimulus, response to organic substance, positive regulation of macromolecule biosynthetic process, positive regulation of phosphorus metabolic process, positive regulation of macromolecule metabolic process, negative regulation of macromolecule metabolic process, positive regulation of gene expression, negative regulation of gene expression, positive regulation of cell communication, negative regulation of cell development, positive regulation of pathway-restricted SMAD protein phosphorylation, regulation of cell death, positive regulation of cell death, regulation of gliogenesis, negative regulation of gliogenesis, response to organic cyclic substance, regulation of striated muscle tissue development,regulation of phosphate metabolic process, sexual reproduction, neural tube patterning, diencephalon development,telencephalon development, forebrain regionalization, dorsal/ventral neural tube patterning, neural tube development, telencephalon regionalization, pituitary gland development, ovulation cycle process, hemopoiesis,myeloid cell differentiation, neuron differentiation, erythrocyte differentiation, regulation of ossification, respiratory tube development, lung development, regulation of bone mineralization, positive regulation of bone mineralization,BMP signaling pathway, forebrain development, developmental induction, positive regulation of cellular biosynthetic process, regulation of protein modification process, positive regulation of protein modification process, response to nutrient levels, response to corticosteroid stimulus, regulation of cellular protein metabolic process, positive regulation of cellular protein metabolic process, regulation of chondrocyte differentiation, negative regulation of chondrocyte differentiation, response to estradiol stimulus, regulation of intracellular transport, positive regulation of intracellular transport, multicellular organism reproduction, response to retinoic acid, regulation of protein localization, regulation of intracellular protein transport, regulation of protein import into nucleus, translocation, positive regulation of protein import into nucleus, translocation, response to vitamin A, response to vitamin, erythrocyte homeostasis, tube morphogenesis, endocrine system development, tube development, growth, regulation of cell proliferation, regulation of protein import into nucleus, regulation of phosphorylation, positive regulation of phosphorylation, odontogenesis of dentine-containing tooth, odontogenesis, homeostatic process, muscle cell differentiation, ovulation cycle, chordate embryonic development, camera-type eye development, tongue development, tongue morphogenesis, response to estrogen stimulus, development of primary sexual characteristics, cell fate commitment, cell-cell signaling involved in cell fate specification, regulation of transcription, negative regulation of cell differentiation, positive regulation of cell differentiation, regulation of myoblast differentiation, negative regulation of myoblast differentiation, regulation of osteoblast differentiation, positive regulation of osteoblast differentiation, regulation of glial cell differentiation,negative regulation of glial cell differentiation, positive regulation of ossification, negative regulation of cell cycle,negative regulation of striated muscle development, positive regulation of transcription, DNA-dependent, positive regulation of nucleobase, nucleoside, nucleotide and nucleic acid metabolic process, positive regulation of phosphate metabolic process, positive regulation of transcription, positive regulation of transcription from RNA polymerase II promoter, development of primary female sexual characteristics, female sex differentiation, regulation of nucleocytoplasmic transport, lung alveolus development, mesoderm morphogenesis, mesodermal cell differentiation,rhythmic process, blood vessel morphogenesis, hemopoietic or lymphoid organ development, response to steroid hormone stimulus, developmental growth, eye morphogenesis, camera-type eye morphogenesis, embryonic morphogenesis, reproductive structure development, reproductive process in a multicellular organism, reproductive cellular process, regulation of muscle development, negative regulation of muscle development, regulation of skeletal muscle tissue development, neuron fate commitment, regulation of

	oligodendrocyte differentiation, negative regulation of oligodendrocyte differentiation, tissue morphogenesis, gland development, regulation of skeletal muscle fiber development, branching morphogenesis of a tube, homeostasis of number of cells, epithelial cell proliferation,regulation of neurogenesis, negative regulation of neurogenesis, positive regulation of transport, positive regulation of developmental process, smooth muscle cell differentiation, regulation of muscle cell differentiation, negative regulation of muscle cell differentiation, regulation of striated muscle cell differentiation, positive regulation of nitrogen compound metabolic process, regulation of phosphorus metabolic process, cartilage development, positive regulation of protein transport, regulation of protein transport, positive regulation of multicellular organismal process, positive regulation of protein metabolic process, regulation of RNA metabolic process, positive regulation of RNA metabolic process, response to glucocorticoid stimulus, regulation of cell cycle, regulation of nervous system development, retina development in camera-type eye, lens induction in camera-type eye, regulation of cell development, regulation of cellular localization, bone development, regulation of SMAD protein nuclear translocation, positive regulation of SMAD protein nuclear translocation, regulation of pathway-restricted SMAD protein phosphorylation, lung morphogenesis,lung epithelium development, epithelium development, bronchus development, trachea development, branching involved in lung morphogenesis, epithelial cell proliferation involved in lung morphogenesis, bud dilation involved in lung branching, respiratory system development, developmental growth involved in morphogenesis, epithelial tube morphogenesis, ureteric bud morphogenesis, regulation of biomineral formation, positive regulation of biomineral formation, regulation of establishment of protein localization,
Background	disease:Defects in BMP4 are the cause of microphthalmia syndromic type 6 (MCOPS6) [MIM:607932]; also known as microphthalmia and pituitary anomalies or microphthalmia with brain and digit developmental anomalies. Microphthalmia is a clinically heterogeneous disorder of eye formation, ranging from small size of a single eye to complete bilateral absence of ocular tissues (anophthalmia). In many cases, microphthalmia/anophthalmia occurs in association with syndromes that include non-ocular abnormalities. MCOPS6 is characterized by microphthalmia/anophthalmia associated with facial, genital, skeletal, neurologic and endocrine anomalies.,function:Induces cartilage and bone formation. Also act in mesoderm induction, tooth development, limb formation and fracture repair.,online information:Bone morphogenetic protein 4 entry,similarity:Belongs to the TGF-beta family.,subunit:Homodimer; disulfide-linked (By similarity). Interacts with GREM2 (By similarity) and SOSTDC1. Part of a complex consisting of TWSG1 and CHRD.,tissue specificity:Expressed in the lung and lower levels seen in the kidney. Present also in normal and neoplastic prostate tissues, and prostate cancer cell lines.,
matters needing attention	Avoid repeated freezing and thawing!
Usage suggestions	This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



Human appendix was stained with anti-BMP-4 Rabbit antibody



Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-BMP-4 antibody. The HRP-conjugated Goat anti-Rabbit IgG (H + L) antibody was used to detect the antibody. Lane 1: Hela Lane 2: K562 Predicted band size: 47kDa Observed band size: 47kDa