Qty: 100 µg/400 µL

Rabbit anti-BMPR-1B (C-term)

Catalog No. 40-9400

Lot No.

Rabbit anti-BMPR-1B (C-term)

FORM
This polyclonal antibody is supplied as a 400 µL aliquot at a concentration of 0.25 mg/mL in phosphate buffered saline (pH 7.4) containing 0.1% sodium azide. This antibody is epitope-affinity purified from rabbit antiserum.

PAD: ZMD.515

IMMUNOGEN
Synthetic peptide derived from the C-terminal region of the human, mouse, rat, sheep, pig, and goat BMPR-1B proteins

SPECIFICITY
This antibody is specific for the BMPR-1B (bone morphogenetic protein receptor type 1B, serine/threonine protein kinase receptor R6 (SKR6), activin receptor-like kinase 6 (ALK-6)) protein. On Western blots, it identifies the target band at ~55 kDa.

REACTIVITY
Reactivity has been confirmed with human K562 cell lysates and rat brain and 2 week-old mouse brain homogenates. Based on amino acid sequence homology, reactivity with sheep, pig, and goat is also expected,

Sample	Western Blotting
Human	+++
Mouse	+++
Rat	+++

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)

USAGE
Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

Western Blotting: 1-3 µg/mL

STORAGE
Store at 2-8°C for up to one month. Store at –20°C for long-term storage. Avoid repeated freezing and thawing.

(cont'd)

BACKGROUND

Bone Morphogenetic Proteins (BMPs) are members of the TGF-β superfamily of cytokines that affect bone and cartilage formation.[1] Mature BMPs are 30-38 kDa proteins that assume a TGF beta-like cysteine knot configuration.[1] Most BMPs are homodimers, but bioactive natural heterodimers have also been reported[1]. BMPs are involved in embryogenesis and morphogenesis of various tissues and organs. They create an environment conducive for bone marrow development by stimulating the production of specific bone matrix proteins and altering stromal cell and osteoclast proliferation. BMPs also regulate the growth, differentiation, chemotaxis, proliferation, and apoptosis of mesenchymal cells, epithelial cells, hematopoietic cells, and neuronal cells, and are responsible for normal dorsal/ventral patterning.

Two type I receptors have been characterized, BMPR-1A (activin receptor-like kinase ALK-3, BRK-1, SKR5), and BMPR-1B (ALK-6, SKR 6), that bind to bone morphogenetic proteins (BMP)-2, BMP-4, and osteogenic protein (OP)-1 (also designated BMP-7).[2-5] Type I receptors involved in BMP signaling can independently bind the various BMP family proteins in the absence of type II receptors. BMPR-1A and BMPR-1B are thought to mediate distinct effects on gene expression, cell differentiation, and morphogenesis in a dose dependent fashion.[2,6] Brachydactyly (BD) type A2 (BDA2), which is an autosomal dominant hand malfunction characterized by the shortening and lateral deviation of the index fingers and first and second toes, is caused by mutations in BMPR-1B that function as dominant negatives *in vitro* and *in vivo*.[7]

References:

1. Hogan BL, *Genes Dev* 10:1580-1594, 1996.
2. Rosenzweig BL, et al. *PNAS* 92:7632-7636, 1995.
3. Ten Dijke P, et al. *J Biol Chem* 269:16985-16988, 1994.
4. Yamada N, et al. *Br J Cancer* 73: 624-629, 1996.
5. Yonemori K, et al. *Am J Pathol* 150:1335-1347, 1997.
6. Soderstrom S, et al. *Cell Tissue Res* 286:269-279, 1996.
7. Lehmann K, et al. *PNAS* 100:12277-12282, 2003.

RELATED PRODUCTS

Product	*Conjugate*	*Cat. No.*
Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

Conjugate	ZyMAX™ Goat x Rabbit IgG (H+L)	ZyMAX™ Goat x Mouse IgG (H+L)
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy™3	81-6115	81-6515
Cy™5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

For Research Use Only

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