

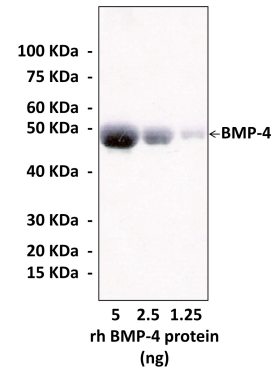
BACKGROUND

Bone morphogenetic protein 4 (BMP-4) is a polypeptide belonging to the TGF-beta TGF superfamily of proteins. Like other bone morphogenetic proteins, BMP-4 is involved in bone and cartilage development, specifically tooth and limb development and fracture repair. It has been shown to be involved in muscle development, bone mineralization, and uterine bud development.¹ In human embryonic development, BMP-4 is a critical signaling molecule required for the early differentiation of the embryo and establishment of a dorsal-ventral axis. BMP-4 is secreted from the dorsal portion of the notochord, and it acts in concert with sonic hedgehog (released from the ventral portion of the notochord) to establish a dorsal-ventral axis for the differentiation of later structures.² BMP-4 stimulates differentiation of overlying ectodermal tissue.³ Inhibition of the BMP-4 signal (by chordin, noggin, or follistatin) causes the ectoderm to differentiate into the neural plate. If these cells also receive signals from FGF, they will differentiate into the spinal cord; in the absence of FGF the cells become brain tissue.

References:

1. Chen, D. et al., Growth Factors 22:233, 2004.
2. Aberdam, D. et al., Bull. Acad. Natl. Med. 189:645, 2005.
3. Czyz, J. & Wobus, A., Differentiation 68:167, 2001.

QUALITY CONTROL DATA



Specific detection of NSO-cell expressed recombinant human BMP-4 proteins in Western blot analysis using BMP-4 Monoclonal Antibody (25H14).

TECHNICAL INFORMATION

Source: Anti-c-Kit is a rabbit polyclonal antibody raised against NSO-expressed recombinant human BMP-4 protein.

Specificity and Sensitivity: Human & mouse BMP-4 proteins. Anti-BMP-4 does not cross-react with other BMP family members.

Storage Buffer: 0.1 M PBS (pH 7.2), 0.1% glycine, 0.1% NaN₃, 0.1% BSA, 50% glycerol.

Storage: Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

APPLICATIONS

Application:	*Dilution:
WB	1:1000
IP	n/d
IHC	n/d
ICC	n/d
FACS	n/d

**Optimal dilutions must be determined by end user.*

