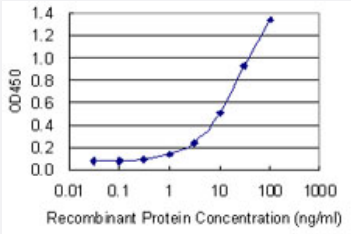
BMP2 monoclonal antibody (M04), clone 3G7

Catalog # H00000650-M04 Size 100 ug

Applications



Sandwich ELISA (Recombinant protein)

Detection limit for recombinant GST tagged BMP2 is 0.3 ng/ml as a capture antibody.

Specification

Product Description	Mouse monoclonal antibody raised against a partial recombinant BMP2.
Immunogen	BMP2 (NP_001191, 283 a.a. ~ 396 a.a) partial recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.
Sequence	QAKHKQRKRLKSSCKRHPLYVDFSDVGWNDWIVAPPGYHAFYCHGECPFPLADHLNSTNHAIVQTLVNSVNSKIPKACCVPTELSAISMLYLDENEKVVLKNYQDMVVEGCGCR
Host	Mouse
Reactivity	Human
Isotype	IgG2a Kappa
Quality Control Testing	Antibody Reactive Against Recombinant Protein.
Storage Buffer	In 1x PBS, pH 7.4
Storage Instruction	Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.

Applications

- Sandwich ELISA (Recombinant protein)

  Detection limit for recombinant GST tagged BMP2 is 0.3 ng/ml as a capture antibody.

  Protocol Download

- ELISA

Gene Info — BMP2

Entrez GeneID	650
GeneBank Accession#	NM_001200
Protein Accession#	NP_001191
Gene Name	BMP2
Gene Alias	BMP2A
Gene Description	bone morphogenetic protein 2
Omim ID	112261 235200
Gene Ontology	Hyperlink
Gene Summary	The protein encoded by this gene belongs to the transforming growth factor-beta (TGFB) superfamily. The encoded protein acts as a disulfide-linked homodimer and induces bone and cartilage formation. [provided by RefSeq
Other Designations	OTTHUMP00000030228

Publication Reference

- BMP2 immune complexes promote new bone formation by facilitating the direct contact between osteoclasts and osteoblasts.

  Yamei Xu, Yao Yang, Ziyi Hua, Shuang Li, Zhenyu Yang, Qianzi Liu, Gang Fu, Ping Ji, Qingqing Wu.

  Biomaterials 2021 Aug; 275:120890.

  Application: Func, Human, Mouse, Alginate microbeads, Human bone marrow-derived mesenchymal stem cells, Mouse orthotopic bone formation model

- The sialylation profile of IgG determines the efficiency of antibody directed osteogenic differentiation of iMSCs by modulating local immune responses and osteoclastogenesis.

  Qingqing Wu, Yao Yang, Dongni Xie, Shuang Li, Yunfei Liu, Linjing Shu, Gang Fu, Yamei Xu, Ping Ji.

  Acta Biomaterialia 2020 Sep; 114:221.

  Application: Conjugation, Flow Cyt, Func, IF, Human, Human induced pluripotent stem cell derived mesenchymal stem cells

- Bacterial cellulose membrane functionalized with hydroxiapatite and anti-bone morphogenetic protein 2: A promising material for bone regeneration.

  Coelho F, Cavicchioli M, Specian SS, Scarel-Caminaga RM, Penteado LA, Medeiros AI, Ribeiro SJL, Capote TSO.

  PLoS One 2019 Aug; 14(8):e0221286.

  Application: IF, Mouse, MC3T3-E1 cells

- Therapeutic antibody directed osteogenic differentiation of Induced pluripotent stem cells derived MSCs.

  Wu Q, Yang B, Cao C, Hu K, Wang P, Man Y.

  Acta Biomaterialia 2018 Jul; 74:222.

  Application: ELISA, Human, Supernatants collected from iPSC-derived mesenchymal stromal cells

- Biomechanical analysis of engineered bone with anti-BMP2 antibody immobilized on different scaffolds.

  Ansari S, Phark JH, Duarte S Jr, Paulino da Silva M, Sharifzadeh N, Moshaverinia A, Zadeh HH.

  Journal of Biomedical Materials Research. Part B, Applied Biomaterials 2016 Oct; 104(7):1465.

  Application: IHC, Rat, Rat calvaria

- Immobilization of Murine Anti-BMP-2 Monoclonal Antibody on Various Biomaterials for Bone Tissue Engineering.

  Ansari S, Freire MO, Pang EK, Abdelhamid AI, Almohaimeed M, Zadeh HH.

  BioMed Research International 2014 Jul; 2014:940860.

  Application: IF, IHC, EM, Rat, Calvarial bone

- Functionalization of scaffolds with chimeric anti-BMP-2 monoclonal antibodies for osseous regeneration.

  Ansari S, Moshaverinia A, Pi SH, Han A, Abdelhamid AI, Zadeh HH.

  Biomaterials 2013 Dec; 34(38):10191.

  Application: Flow Cyt, IF, Mouse, C2C12 cells

- Co-encapsulation of anti-BMP2 monoclonal antibody and mesenchymal stem cells in alginate microspheres for bone tissue engineering.

  Moshaverinia A, Ansari S, Chen C, Xu X, Akiyama K, Snead ML, Zadeh HH, Shi S.

  Biomaterials 2013 Sep; 34(28):6572.

  Application: Flow Cyt, IF, Human, hBMMSCs

- Antibody-mediated osseous regeneration: the early events in the healing response.

  Freire MO, Kim HK, Kook JK, Nguyen A, Zadeh HH.

  Tissue Engineering. Part A 2013 May; 19(9-10):1165.

  Application: IF, Rat, Calvarial

- Antibody-mediated osseous regeneration: a novel strategy for bioengineering bone by immobilized anti-bone morphogenetic protein-2 antibodies.

  Freire MO, You HK, Kook JK, Choi JH, Zadeh HH.

  Tissue Engineering. Part A 2011 Dec; 17(23-24):2911.

  Application: Flow Cyt, Func, IHC, Mouse, Rat, C2C12 cells, Calvaria

Pathway

- Basal cell carcinoma
- Cytokine-cytokine receptor interaction
- Hedgehog signaling pathway
- Pathways in cancer
- TGF-beta signaling pathway

Disease

- Abortion
- Asthma
- Calcinosis
- Cardiovascular Diseases
- Cleft Lip
- Cleft Palate
- Colorectal Neoplasms
- Diabetes Mellitus
- Diabetic Nephropathies

- Disease Progression
- Edema
- Genetic Predisposition to Disease
- Hemochromatosis
- Hyperparathyroidism
- Kidney Failure
- Narcolepsy
- Obesity
- Ossification of Posterior Longitudinal Ligament
- Osteoarthritis
- Osteoporosis
- Ovarian Failure
- Overweight
- Polycystic Ovary Syndrome
- Puberty
- Sudden Infant Death
- Thrombophilia
- Tobacco Use Disorder