

Datasheet: MCA5635GA

Description:	MOUSE ANTI HUMAN GDF9
Specificity:	GDF9
Other names:	GROWTH DIFFERENTIATION FACTOR 9
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	mAb-GDF9-53
Isotype:	IgG
Quantity:	0.1 mg

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry			■	
Immunohistology - Frozen	■			
Immunohistology - Paraffin (1)	■			1/25 - 1/100
ELISA			■	
Immunoprecipitation			■	
Western Blotting	■			1/100 - 1/1000
Functional Assays	■			

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

(1) This product requires antigen retrieval using heat treatment prior to staining of paraffin sections.

Target Species	Human
Species Cross Reactivity	Reacts with: Mouse, Sheep N.B. Antibody reactivity and working conditions may vary between species.
Product Form	Purified IgG - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide (NaN ₃)
Approx. Protein	IgG concentration 1.0mg/ml

Concentrations

Immunogen Tuberculin coupled synthetic peptide VPAKYSPLSVLTIEPDGSIAYKEYEDMIATKC from near the C-terminal region of mature human GDF9.

External Database Links

UniProt:

O60383	Related reagents
Q07105	Related reagents
O77681	Related reagents

Entrez Gene:

2661	GDF9	Related reagents
14566	Gdf9	Related reagents
100217402	GDF9	Related reagents

Synonyms Gdf-9

Fusion Partners Spleen cells from immunised Balb/c mice were fused with cells of the SP2/0 myeloma cell line.

Specificity **Mouse anti Human GDF9 antibody, clone mAb-GDF9-53** recognizes an epitope within the highly conserved EPDG sequence of GDF9 (growth differentiation factor 9), a 454 amino acid ~51 kDa pro-protein which is cleaved to form a ~17.5 kDa GDF9 monomer which self associates to form an active homodimeric growth factor, a member of the TGF-beta superfamily, closely related to bone morphogenetic proteins (BMPs).

GDF9 is expressed by oocytes, playing a vital role in ovarian folliculogenesis, normal follicle development, and fertility. GDF9 signals through binding to bone morphogenetic protein type II receptor (BMPRII), and apparent subsequent activation of TGF-beta type I receptor, otherwise known as activin receptor-like kinase-5 (ALK-5).

Mouse anti Human GDF9 antibody, clone mAb-GDF9-53 recognises GDF9 with high immuno-affinity, and has been shown to neutralize GDF9 biological activity ([Gilchrist *et al.* 2004](#), [Dragovic *et al.* 2005](#)).

Removal of sodium azide is recommended prior to use in functional assays – Bio-Rad recommend the use of [EQU003](#) for this purpose.

Histology Positive Control Tissue Human ovary

References

1. Gilchrist RB *et al.* (2004) Immunoneutralization of growth differentiation factor 9 reveals it partially accounts for mouse oocyte mitogenic activity. [Biol Reprod. 71 \(3\): 732-9.](#)
2. Dragovic RA *et al.* (2005) Role of oocyte-secreted growth differentiation factor 9 in the regulation of mouse cumulus expansion. [Endocrinology. 146 \(6\): 2798-806.](#)
3. Simpson, C.M. *et al.* (2012) Activation of Latent Human GDF9 by a Single Residue Change (Gly391Arg) in the Mature Domain. [Endocrinology. 153: 1301-10.](#)
4. Watson, L.N. *et al.* (2012) Heparan sulfate proteoglycans regulate responses to oocyte paracrine signals in ovarian follicle morphogenesis. [Endocrinology. 153: 4544-55.](#)
5. Li, J.J. *et al.* (2014) Modifications of human growth differentiation factor 9 to improve the generation of embryos from low competence oocytes. [Mol Endocrinol. me20141173.](#)
6. Mottershead, D.G. *et al.* (2008) Characterization of recombinant human growth differentiation

factor-9 signaling in ovarian granulosa cells. [Mol Cell Endocrinol. 283: 58-67.](#)

7. Pulkki, M.M. *et al.* (2011) The bioactivity of human bone morphogenetic protein-15 is sensitive to C-terminal modification: characterization of the purified untagged processed mature region. [Mol Cell Endocrinol. 332: 106-15.](#)

Storage	Store at +4°C or at -20°C if preferred. Storage in frost-free freezers is not recommended. This product should be stored undiluted. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.
Shelf Life	18 months from date of despatch.
Health And Safety Information	Material Safety Datasheet documentation #10040 available at: 10040: https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Mouse IgG (STAR76...)	RPE
Goat Anti Mouse IgG IgA IgM (STAR87...)	Alk. Phos. , HRP
Goat Anti Mouse IgG (H/L) (STAR117...)	Alk. Phos. , DyLight®488 , DyLight®549 , DyLight®649 , DyLight®680 , DyLight®800 , FITC , HRP
Rabbit Anti Mouse IgG (STAR9...)	FITC
Goat Anti Mouse IgG (STAR77...)	HRP
Rabbit Anti Mouse IgG (STAR12...)	RPE
Goat Anti Mouse IgG (Fc) (STAR120...)	FITC , HRP
Rabbit Anti Mouse IgG (STAR8...)	DyLight®800
Goat Anti Mouse IgG (STAR70...)	FITC
Human Anti Mouse IgG2a (HCA037...)	FITC , HRP
Rabbit Anti Mouse IgG (STAR13...)	HRP
Human Anti Mouse IgG1 (HCA036...)	HRP
Human Anti Mouse IgG2b (HCA038...)	FITC , HRP
Human Anti Mouse IgG3 (HCA039...)	FITC , HRP , RPE

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL \(MCA928\)](#)
[MOUSE IgG2b NEGATIVE CONTROL \(MCA691\)](#)
[MOUSE IgG2a NEGATIVE CONTROL \(MCA929\)](#)

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