# **Technical Data Sheet**

# **Purified Mouse Anti-Metaxin**

# Product Information

Material Number:	611768
Size:	50 µg
Concentration:	250 µg/ml
Clone:	28/Metaxin
Immunogen:	Mouse Metaxin aa. 66-185
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Mouse
·	Tested in Development: Rat
Target MW:	35 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and $\leq 0.09\%$ sodium
0	azide.

### Description

The *metaxin* (*Mtx*) gene is closely linked to the genes for *thrombospondin 3* (*Thbs3*), *Muc1*, and *glucocerebrosidase* (*Gba*) on human chromosome 1q21 and mouse chromosome 3E3-F1. *Mtx* is located between *Thbs3* and *Gba* and was thus given the name "metaxin", meaning "in between", in Greek. *Mtx* and *Thbs3* are positioned in a head-to-head orientation, are transcribed divergently, and share a common promoter. *Mtx* and *Gba* are positioned in a tail-to-tail orientation and are transcribed convergently. The metaxin protein is ubiquitously expressed and is 91.5% identical between human and mouse. It is rich in leucine, basic, and acidic amino acids and lacks an N-terminal signal sequence and N-glycosylation sites. Efforts to develop a mouse model for Gaucher disease involved disruption of the 3' flanking region of the *Gba*, which is the terminal exon of *Mtx*. Homozygous disruption of this region resulted in the death of mice early in gestation, indicating the importance of metaxin in embryonic development. In addition, metaxin contains a putative C-terminal membrane signal anchor domain and localizes to the mitochondrial outer membrane where it is thought to function in mitochondrial import.



Western blot analysis of Metaxin in a RSV-3T3 cell Iysate. Lane 1: 1:1000, lane 2: 1:2000, lane 3: 1:4000 dilution of the mouse anti-Metaxin antibody.



Immunofluorescence staining of NIH/3T3 cells (Mouse embryo fibroblast cells; ATCC CRL-1658).

# Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. Store undiluted at -20°C.

# **Application Notes**

Ap	plication	

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

#### **Recommended Assay Procedure:**

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western Blotting.shtml

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# **Suggested Companion Products**

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal

## **Product Notices**

- 1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
- 2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
- 3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
- 4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

#### References

Armstrong LC, Komiya T, Bergman BE, Mihara K, Bornstein P. Metaxin is a component of a preprotein import complex in the outer membrane of the mammalian mitochondrion. *J Biol Chem.* 1997; 272(10):6510-6518.(Biology)

Bornstein P, McKinney CE, LaMarca ME, et al. Metaxin, a gene contiguous to both thrombospondin 3 and glucocerebrosidase, is required for embryonic development in the mouse: implications for Gaucher disease. *Proc Natl Acad Sci U S A.* 1995; 92(10):4547-4551.(Biology)

Long GL, Winfield S, Adolph KW, Ginns EI, Bornstein P. Structure and organization of the human metaxin gene (MTX) and pseudogene. *Genomics.* 1996; 33(2):177-184.(Biology)