Technical Data Sheet

Purified Mouse Anti-Endothelin 1 Receptor

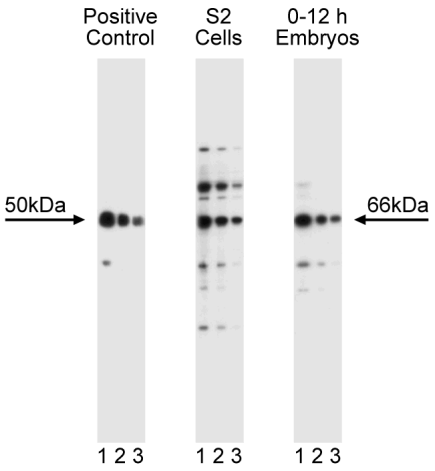
Product Information

Material Number:	**612629**
Size:	50 µg
Concentration:	250 µg/ml
Clone:	16/Endothelin 1 Receptor
Immunogen:	Rat Endothelin 1 Receptor aa. 230-352
Isotype:	Mouse IgG1
Reactivity:	Drosophila Tested in Development: Rat, Mouse, Human
Target MW:	50-66 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Endothelin-1 (ET-1) is a potent vasoconstrictor that is secreted by vascular endothelial cells. ET-1, ET-2, ET-3, and endothelin β are members of a family of related peptides. All are 21 amino acid peptides with two disulfide bridges. ET-1 and ET-2 differ by only two residues, while ET-3 differs from both by six residues. ET-1 and ET-2 are highly effective on vascular smooth muscle, while the effects of ET-3 are minimal. ET-1 and its precursor, big ET-1, are the primary forms present in the circulation. Circulating ET-1 plays a pathologic role in the etiology of hypertension and antagonists are utilized in the treatment of this disease. The ET-1 receptor is a seven-transmembrane-domain receptor of the G-protein-coupled family that signals via transient increases in intracellular Ca2+. It is primarily expressed in lung and heart and is detected at lower levels in liver, brain, muscle, and kidney. ET-1 receptor interacts with ET-1, ET-2, and ET-3. However, it has a 2-3 fold higher affinity for ET-1 than ET-2 and the affinity for ET-3 is more than 100 fold lower. Thus, ligation of the ET-1 receptor by ET-1 induces increased intracellular Ca2+ that signals to promote vasoconstriction.

This antibody is routinely tested by western blot analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



Western blot analysis of Endothelin Receptor-1. *Lysates from rat testis (5 µg/lane), S2 cells (7.5 µg/lane), 0-12 hours Drosophila embryos (7.5 µg/lane) were probed with the mouse anti-endothelin receptor 1 antibody at concentrations of 0.5 µg/ml (lane 1), 0.25 µg/ml (lane 2), and 0.125 µg/ml (lane 3). Endothelin Receptor-1 is detectable at 50-66 kDa.*

Preparation and Storage

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

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Application Notes

Application

Western blot	Routinely Tested

Recommended Assay Procedure:

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

The *Drosophila melanogaster* gene CG18192 encodes a putative neuropeptide receptor involved in the G-protein coupled receptor protein signaling pathway, which is a component of the integral membrane protein. Its amino acid sequence contains rhodopsin-like, GPCR superfamily and bombesin receptor domains. Similar sequences have been identified in *Homo sapiens*, *Mus musculus* and *Rattus*. It has been mapped cytologically to 54D3. [FBgn0050106] *(The FlyBase Consortium (http://flybase.org/))*.

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>gb|AAF57820.1| (AE003802) CG18192 gene product [Drosophila melanogaster] Length = 524

 Score = 46.6 bits (109), Expect = 2e-06
 Identities = 24/67 (35%), Positives = 41/67 (60%), Gaps = 3/67 (4%)

Query: 31  FGFYFCMPLVCTAIFYTLMTCEMLNRRN--GSLRIALSEHLKQRREVAKTVFCLVVIFAL 88
           F  Y+ +PLV  A+FY L+   ++   +  G ++ A+ + ++ RR+VA TV   VVIF +
Sbjct: 146 FLVYYAIPLVVIAVFYVLIALHLMYSASVPGEIQGAVRQ-VRARRKVAVTVLAFVVIFGI 204

Query: 89  CWFPLHL 95
           C+ P H+
Sbjct: 205 CFLPYHV 211
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Suggested Companion Products

Catalog Number	Name	Size	Clone
611472	Rat Testis Lysate	500 µg	(none)
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

Lin HY, Kaji EH, Winkel GK, Ives HE, Lodish HF. Cloning and functional expression of a vascular smooth muscle endothelin 1 receptor. *Proc Natl Acad Sci U S A.* 1991; 88(8):3185-3189.(Biology)

Masuda Y, Miyazaki H, Kondoh M, et al. Two different forms of endothelin receptors in rat lung. *FEBS Lett.* 1989; 257(2):208-210.(Biology)