Human Activin B Alexa Fluor® 532-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 146807

Catalog Number: FAB659X

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Activin B βB subunit in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant human (rh) Inhibin B or rhActivin A is observed. In Western blots, approximately 20% cross-reactivity with rhInhibin B
Source	Monoclonal Mouse IgG_1 Clone # 146807
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human Activin B Gly293-Ala407 Accession # Q53T31
Conjugate	Alexa Fluor 532 Excitation Wavelength: 534 nm Emission Wavelength: 553 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

Neutralization	Optimal dilution of this antibody should be experimentally determined.
Western Blot	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Activins and inhibins, members of the TGF-β superfamily, are disulfide-linked dimeric proteins that were originally purified from gonadal fluids as proteins that stimulated or inhibited, respectively, pituitary follicle stimulating hormone (FSH) release. These proteins have since been shown to have a wide range of biological activities including: mesoderm induction, neural cell differentiation, bone remodeling, hematopoiesis and reproductive physiology. Activins/inhibins are produced as precursor proteins with an amino-terminal propeptide that is cleaved to release the carboxy-terminal bioactive ligands. Activins are homodimers or heterodimers of the various β subunit isoforms, while inhibins are heterodimers of a unique α subunit and one of the various β subunits. Five β subunits (mammalian β_A, β_B, β_C, β_E and *Xenopus* β_D) have been cloned. The activin/inhibin nomenclature reflects the subunit composition of the proteins: activin A (β_A-β_A), activin B (β_B-β_B), activin AB (β_A-β_B), inhibin A (α-β_A) and inhibin B (α-β_B). At present, little is known about the contribution of the other β subunits to activin or inhibin formation and biology. At the amino acid sequence level, the mature human βB subunit is greater than 98% identical to mouse βB, while the human and mouse α subunits share approximately 80% identity. Similarly to other TGF-β family members, activins exert their biological activities through binding to the heterodimeric complex composed of two membrane spanning serine-threonine kinases designated as type I and type II. Two forms of activin receptor type I (Act RI-A and Act RI-B) and two forms of activin receptor type II (Act RII-A and Act RII-B) have been identified. Activin binds directly to Act RII, the complex then associates with Act RI and initiates signaling. Besides activins, Act RII has been shown to bind certain other TGF-β superfamily members. Inhibin A has been shown to bind with low-affinity to Act RII. The existence of a distinct inhibin-specific receptor and/or signal transduction pathway has been hypothesized.

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