

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Activin RIIB in direct ELISAs and Western blots. In direct ELISAs, approximately 50% cross-reactivity with recombinant mouse Activin RIIB is observed, and less than 1% cross-reactivity with recombinant human (rh) Activin RIIA, rhActivin RIA, and rhActivin RIB is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Activin RIIB Ser19-Thr134 Accession # CAA54671
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

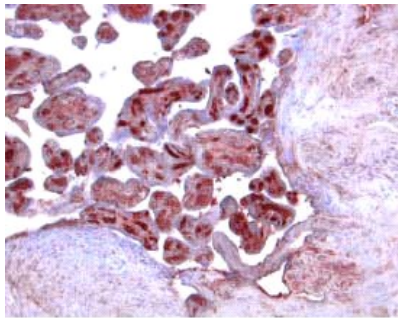
APPLICATIONS

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.

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Human Activin RIIB Fc Chimera (Catalog # 339-RB)
Immunohistochemistry	5-15 µg/mL	See Below
Blockade of Receptor-ligand Interaction	In a functional ELISA, 1-3 µg/mL of this antibody will block 50% of the binding of 30 ng/mL of Recombinant Biotinylated Human/Mouse/Rat Activin A to immobilized Recombinant Human Activin RIIB Fc Chimera (Catalog # 339-RB) coated at 2 µg/mL (100 µL/well). At 30 µg/mL, this antibody will block >90% of the binding.	

DATA

Immunohistochemistry



Activin RIIB in Human Placenta. Activin RIIB was detected in immersion fixed paraffin-embedded sections of human placenta (cross-section of chorionic villi) using 5 µg/mL Goat Anti-Human Activin RIIB Antigen Affinity-purified Polyclonal Antibody (Catalog # AF339) overnight at 4 °C. Tissue was stained with the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Activin isoforms and other members of the TGF- β superfamily exert their biological effects by binding to heteromeric complexes of a type I and a type II serine-threonine kinase receptor, both of which are essential for signal transduction. Seven type I and five type II receptors, including the two type I and the two type II activin receptors, designated ActR-I(A), ActR-IB, ActR-II(A) and ActR-IIB, have been cloned from mammals. Through alternative mRNA splicing, multiple ActR-IIB isoforms can also be generated, adding to the complexity of the activin receptor system. Different activin isoforms bind with different high-affinities to the various type II isoforms. Type I activin receptors do not bind directly to activin, but will associate with the type II receptor-activin complex and initiate signal transduction. Besides the activin isoforms, ActR-II will also bind inhibin, BMP-2 and BMP-7 with lower affinities. ActR-I can also bind and form signaling complexes with the BMP-2/7-bound BMPR-II. Activin type II receptors are highly conserved. Human, mouse and rat type II activin receptors share greater than 98% amino acid sequence homology. Recombinant soluble activin type II receptors bind activin with high affinity, and are potent activin antagonists.

References:

1. Attisano, L. *et al.* (1996) *Mol. and Cell Biol.* **16**:1066.
2. Woodruff, T.K. (1998) *Biochem. Pharmacology* **55**:953.