

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Activin RIA/ALK-2 in direct ELISAs and Western blots.
Source	Monoclonal Mouse IgG ₁ Clone # 71412
Purification	Protein A or G purified from ascites
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human Activin RIA/ALK-2 Asp23-Val124 Accession # Q04771
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.

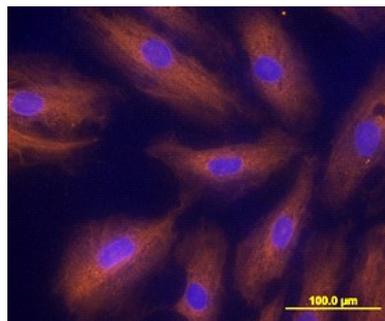
APPLICATIONS

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	1 µg/mL	Recombinant Human Activin RIA/ALK-2 Fc Chimera (Catalog # 637-AR) under non-reducing conditions only
Immunocytochemistry	8-25 µg/mL	See Below

DATA

Immunocytochemistry



Activin RIA/ALK-2 in HUVEC Human Cells. Activin RIA/ALK-2 was detected in immersion fixed HUVEC human umbilical vein endothelial cells using Mouse Anti-Human Activin RIA/ALK-2 Monoclonal Antibody (Catalog # MAB637) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (orange; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 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. To date, 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 BMPRII. Activin type I receptors are highly conserved. Human, mouse and bovine type IA activin receptors share greater than 98% amino acid sequence homology. Recombinant soluble activin type I receptor does not bind activin.

References:

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