Rat ALK-7 Alexa Fluor® 700-conjugated Antibody

Monoclonal Mouse IgG_{2A} Clone # 118311

Catalog Number: FAB5771N

100 µg

DESCRIPTION

Species Reactivity	Rat
Specificity	Detects rat ALK-7 in Western blots. In Western blots, no cross-reactivity with recombinant human Activin R1B is observed.
Source	Monoclonal Mouse IgG_{2A} Clone # 118311
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant rat ALK-7 Leu26-Arg108 Accession # NP_620790
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *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.*

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10^6 cells	Rat cortical stem cells

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

Transforming growth Factor beta (TGF-β) superfamily ligands exert their biological activities via binding to heteromeric receptor complexes of two types (I and II) of serine/threonine kinases. Type II receptors are constitutively active kinases that phosphorylate type I receptors upon ligand binding. In turn, activated type I kinases phosphorylate downstream signaling molecules including the various smads. Transmembrane proteoglycans, including the type III receptor (betaglycan) and endoglin, can bind and present some of the TGF-β superfamily ligands to type I and II receptor complexes and enhance their cellular responses. Seven type I receptors (also termed activin receptor-like kinase (ALK)) and five type II receptors have been isolated from mammals. ALK-2, -3, -4, -5, and -6 are also known as Activin R1A, BMPR-1A, Activin R1B, TGF-β R1, and BMPR-1B, respectively, reflecting their ligand preferences. ALK-7 shares with other type I receptors a cysteine-rich domain with conserved cysteine spacing in the extracellular region, and a glycine-and serine-rich domain (the GS domain) preceding the kinase domain. Rat ALK-7 expression is restricted to the adult central nervous system, suggesting a possible role of ALK-7 during postnatal maturation and maintenance of several neuronal subpopulations in the cerebellum.

References:

1. ten Dijke, P. *et al*. (1993) Oncogene **8**:2879.
2. ten Dijke, P. *et al*. (1994) Science **264**:101.
3. Ryden, M. *et al*. (1996) J. Biol. Chem. **271**:30603.

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