

Mouse Tgfbr1 Antibody (Center) Blocking Peptide
Synthetic peptide
Catalog # BP14778c**Specification**

Mouse Tgfbr1 Antibody (Center) Blocking Peptide - Product InformationPrimary Accession [Q64729](#)**Mouse Tgfbr1 Antibody (Center) Blocking Peptide - Additional Information****Gene ID** 21812**Other Names**

TGF-beta receptor type-1, TGFR-1, ESK2, Transforming growth factor-beta receptor type I, TGF-beta receptor type I, TbetaR-I, Tgfbr1

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Mouse Tgfbr1 Antibody (Center) Blocking Peptide - Protein Information**Name** Tgfbr1**Function**

Transmembrane serine/threonine kinase forming with the TGF- beta type II serine/threonine kinase receptor, TGFR2, the non- promiscuous receptor for the TGF-beta cytokines TGFB1, TGFB2 and TGFB3. Transduces the TGFB1, TGFB2 and TGFB3 signal from the cell surface to the cytoplasm and is thus regulating a plethora of physiological and pathological processes including cell cycle arrest in epithelial and hematopoietic cells, control of mesenchymal cell proliferation and differentiation, wound healing, extracellular matrix production, immunosuppression and carcinogenesis. The formation of the receptor complex composed of 2 TGFR1 and 2 TGFR2 molecules symmetrically bound to the cytokine dimer results in the phosphorylation and the activation of TGFR1 by the constitutively active TGFR2. Activated TGFR1 phosphorylates SMAD2 which dissociates from the receptor and interacts with SMAD4. The SMAD2-SMAD4 complex is subsequently translocated to the nucleus where it modulates the transcription of the TGF-beta-regulated genes. This constitutes the canonical SMAD-dependent TGF-beta signaling cascade. Also involved in non-canonical, SMAD-independent TGF-beta signaling pathways. For instance, TGFR1 induces TRAF6 autoubiquitination which in turn results in MAP3K7 ubiquitination and activation to trigger apoptosis. Also regulates epithelial to mesenchymal transition through a SMAD-independent signaling pathway through PARD6A phosphorylation and activation (By similarity).

Cellular Location

Cell membrane {ECO:0000250|UniProtKB:P36897}; Single-pass type I membrane protein {ECO:0000250|UniProtKB:P36897} Cell junction, tight junction {ECO:0000250|UniProtKB:P36897}. Membrane raft {ECO:0000250|UniProtKB:P36897}. Cell surface {ECO:0000250|UniProtKB:P36897}

Mouse Tgfbr1 Antibody (Center) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

Mouse Tgfbr1 Antibody (Center) Blocking Peptide - Images**Mouse Tgfbr1 Antibody (Center) Blocking Peptide - Background**

On ligand binding, forms a receptor complex consisting of two type II and two type I transmembrane serine/threonine kinases. Type II receptors phosphorylate and activate type I receptors which autophosphorylate, then bind and activate SMAD transcriptional regulators. Receptor for TGF-beta.

Mouse Tgfbr1 Antibody (Center) Blocking Peptide - References

Ghoreschi, K., et al. Nature 467(7318):967-971(2010)Kel, J.M., et al. J. Immunol. 185(6):3248-3255(2010)Droguett, R., et al. Exp. Cell Res. 316(15):2487-2503(2010)Moreno, S.G., et al. Dev. Biol. 342(1):74-84(2010)Shimogori, T., et al. Nat. Neurosci. 13(6):767-775(2010)