

TROY/TNFRSF19 Protein, Mouse (HEK293, His)

Cat. No.:	HY-P73570
Synonyms:	Tumor necrosis factor receptor superfamily member 19; TRADE; TNFRSF19; TROY
Species:	Mouse
Source:	HEK293
Accession:	Q9JLL3 (E30-L170)
Gene ID:	29820
Molecular Weight:	Approximately 25-30 kDa due to the glycosylation

PROPERTIES

AA Sequence	<pre> E T G D C R Q Q E F K D R S G N C V L C K Q C G P G M E L S K E C G F G Y G E D A Q C V P C R P H R F K E D W G F Q K C K P C A D C A L V N R F Q R A N C S H T S D A V C G D C L P G F Y R K T K L V G F Q D M E C V P C G D P P P P Y E P H C T S K V N L V K I S S T V S S P R D T A L </pre>
Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized Human Lgr5/GPR49, at 2 µg/mL (100 µL/well) can bind TNFRSF19. The KD for this effect is 173.6 nM.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	TROY Protein shows a unique tissue distribution in the embryo as well as after birth; in the embryo, TROY is exclusively expressed in the epithelium including the neuroepithelium, skin, bronchiolar epithelium, conjunctiva, and so forth, whereas after birth, TROY Protein is strongly expressed in hair follicles like Edar as well as in neurons ^[1] . TROY Protein is expressed in several invasive cancers, including colorectal cancer, lung cancer, melanoma, nasopharyngeal carcinoma, prostate cancer and GBM ^[3] .
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The amino acid sequence of human TROY protein has low homology for mouse TROY protein. TROY Protein is a growth-promoting signaling molecule that also regulates the NF- κ B pathway via interacting with RKIP^[2]. In addition, increased TROY expression promotes STAT3 phosphorylation and STAT3 transcriptional activity that is dependent upon JAK1^[3]. TROY interacts with LGR5 and inhibits Wnt signaling^[4]. Knock-down of TROY suppresses the growth of glioma cells and induces cell cycle arrest at the G1-S phase in U87 cells, significantly decreasing NF- κ B luciferase activity^[2]. Increased TROY expression increases JAK1 phosphorylation, and silencing TROY expression inhibits GBM cell invasion, and increases sensitivity to temozolomide in glioblastoma^[3].

REFERENCES

- [1]. Kojima T, et al. TROY, a newly identified member of the tumor necrosis factor receptor superfamily, exhibits a homology with Edar and is expressed in embryonic skin and hair follicles. *J Biol Chem*. 2000 Jul 7;275(27):20742-7.
- [2]. Liu X, et al. TROY interacts with RKIP to promote glioma development. *Oncogene*. 2019 Feb;38(9):1544-1559.
- [3]. Ding Z, et al. TROY signals through JAK1-STAT3 to promote glioblastoma cell migration and resistance. *Neoplasia*. 2020 Sep;22(9):352-364.
- [4]. Fafulek B, et al. Troy, a tumor necrosis factor receptor family member, interacts with lgr5 to inhibit wnt signaling in intestinal stem cells. *Gastroenterology*. 2013 Feb;144(2):381-391.
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Caution: Product has not been fully validated for medical applications. For research use only.

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