Luspatercept

Cat. No.:	HY-P99720
CAS No.:	1373715-00-4
Target:	TGF-beta/Smad
Pathway:	Stem Cell/Wnt; TGF-beta/Smad
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description

Luspatercept (ACE-536) is a recombinant modified ActRIIB fusion protein that binds with transforming growth factor β superfamily ligands. Luspatercept increases the erythrocyte numbers and promotes maturation of erythroid precursors. Luspatercept binds with GDF11 and inhibits Smad2/3 signaling. Luspatercept can be used for the research of anemia[1].

In Vitro

Luspatercept (0.1-1000 ng/mL) inhibits Smad2 and Smad 3 signaling induced by GDF11 and GDF8 in A204 cells[1].
Luspatercept binds with GDF11, GDF8, activin B, BMP10 and BMP6[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Luspatercept (0.1-60 mg/kg, s.c.; 10 mg/kg, i.v.; twice weekly for 8 weeks) increases red blood cell (RBC) count, hemoglobin levels and hematocrit in mice, rats and monkeys[1].
Luspatercept (10 mg/kg; s.c., once) reduces erythroid burst forming units (BFU-Es) and erythroid colony-forming units (CFU-Es) from bone marrow and spleen of C57BL/6 mice[1].
Luspatercept (10 mg/kg; i.p., once) inhibits Smad2/3 phosphorylation in mouse spleen[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	C57BL/6 mice[1]
Dosage:	0.1, 0.3, 1, 3 and 10 mg/kg
Administration:	Subcutaneous injection and intravenous injection; 0.1-10 mg/kg (C57BL/6 mice, s.c.), 6-60 mg/kg (Sprague Dawley rats, s.c.), 0.4-30 mg/kg (cynomolgus monkeys, s.c.), 10 mg/kg, (cynomolgus monkeys, i.v.); twice weekly for 8 weeks
Result:	Dose-dependently increased the level of RBC, hemoglobin and hematocrit in mice, rats and monkeys.

REFERENCES

[1]. Suragani RN, et al. Transforming growth factor-β superfamily ligand trap ACE-536 corrects anemia by promoting late-stage erythropoiesis. Nat Med. 2014 Apr;20(4):408-14.

Caution: Product has not been fully validated for medical applications. For research use only.

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