

Development of a tri-functional bispecific antibody candidate activating Tie2 and inhibiting VEGF/Ang-2 for treating wet age-related macular degeneration (wAMD)

MabTics Co., Ltd.



OPHTHALMOLOGY	Candidate
Product Type	Bispecific antibody
Indication	Wet age-related macular degeneration (wAMD)
Target	Tie2 (TEK receptor tyrosine kinase) and VEGF
MoA(Mechanism of Action)	<ul style="list-style-type: none"> • Tie2 & cascade signaling activation <ul style="list-style-type: none"> - Phosphorylation of Tie2 and eNOS/AKT/ERK • Blockade of Ang-2 binding to Tie2 • Neutralization of VEGF <ul style="list-style-type: none"> - Inhibition of VEGFR2 phosphorylation • Anti-inflammation and anti-permeability activity <ul style="list-style-type: none"> - Inhibition of VEGF-induced NF-κB - Maintenance of endothelial adherent junction via VE-cadherin expression
Competitiveness	<ul style="list-style-type: none"> • Tri-functional activity <ul style="list-style-type: none"> - ① Tie2 activation, ② Inhibition of Ang-2 activity, ③ VEGF/VEGFR2 inhibition <div style="text-align: center; margin-top: 10px;"> <p>Single Action vs Triple action vs Double action</p> <p>1st-Gen. : EYLEA vs 3rd-Gen. : MT-103 vs 2nd-Gen. : Vabysmo</p> <p>1. VEGF/R inhibition vs 1. VEGF/R inhibition, 2. Ang2 inhibition, 3. Tie2 activation vs 1. VEGF/R inhibition, 2. Ang2 inhibition</p> <div style="border: 1px solid blue; padding: 5px; margin: 10px auto; width: fit-content;"> <p>MT-103</p> <ul style="list-style-type: none"> • More effective & responsible in patients resistant to anti-VEGF therapies • Inhibits Ang2 binding to Tie2 • Normalizes & stabilizes pre-formed abnormal vessels </div> <ul style="list-style-type: none"> • More effective in a certain pathological condition (Ang1^{low} / Ang2^{high}) • Directly activates Tie2 • Normalizes & stabilizes pre-formed abnormal vessels </div>
Development Stage	Candidate
Route of Administration	Intravitreal