

Development of Complement C5-inhibiting antibody for Autoimmune diseases



IMMUNOLOGY	Non-Clinical
Product Type	Antibody
Indication	1st indication: Generalized Myasthenia Gravis 2nd indication: Neuromyelitis Optica
Target	Complement C5
MoA(Mechanism of Action)	<ul style="list-style-type: none"> The complement system forms the first line of defense in innate immunity. It plays an important role in autoimmune diseases where the activated immune system destroys the body's normal cells. IM-101 binds to C5 and inhibits its interaction with C5 convertase, thereby inhibiting the conversion of C5 to C5a and C5b. Activation of C5b leads to the formation of membrane attack complexes on the surface of cell membranes leading to the lysis of the cell. The inhibition of their formation can block the destruction of cells.
Competitiveness	<ul style="list-style-type: none"> Suppressing complement activity is the key to controlling the severity of many autoimmune diseases. In terms of efficacy, IM-101 is superior to other C5 inhibitors that are in development or have been approved. IM-101 completely inhibits both classical and alternative pathways of the complement system, whereas other C5 inhibitors show sub-optimal complement inhibiting activity in either or both pathways. IM-101 shows better efficacy overall than APL-1, an active moiety of C3 inhibitor Empaveli®
Development Stage	Phase 1 clinical trial in US (an IND has been submitted)
Route of Administration	Intravenous (IV)