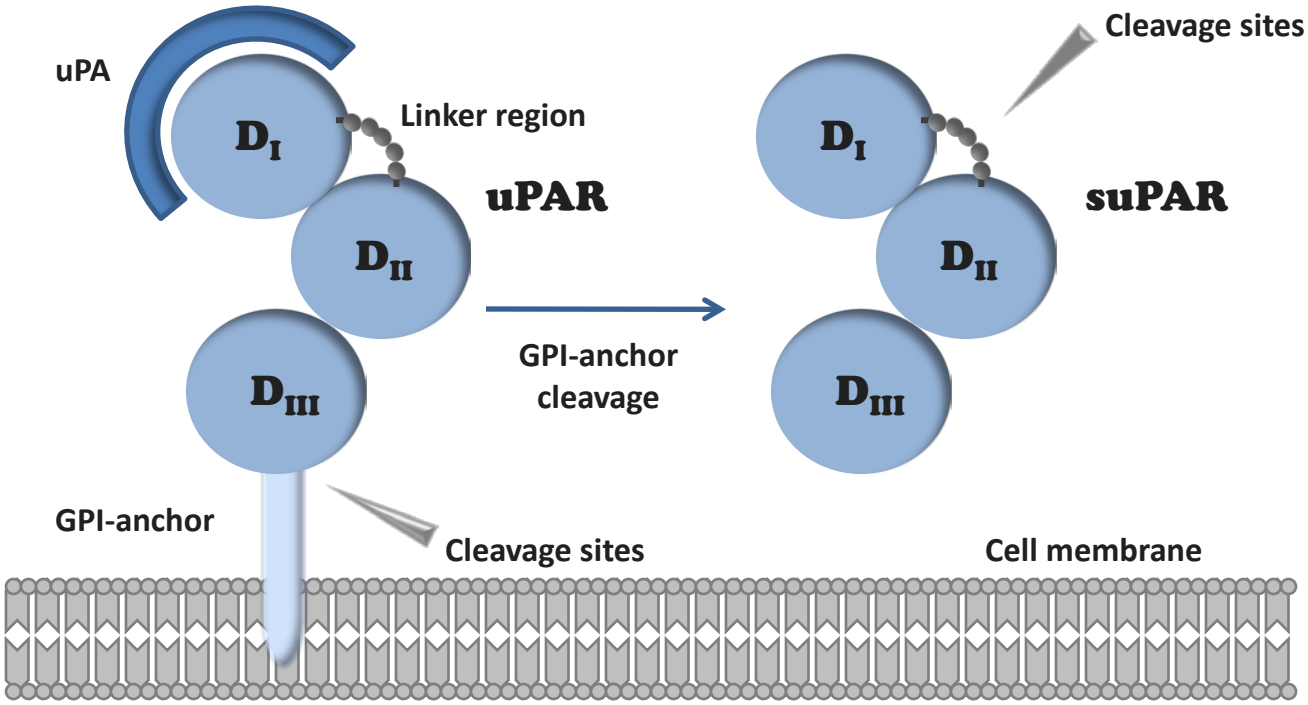
Molecular function of suPAR

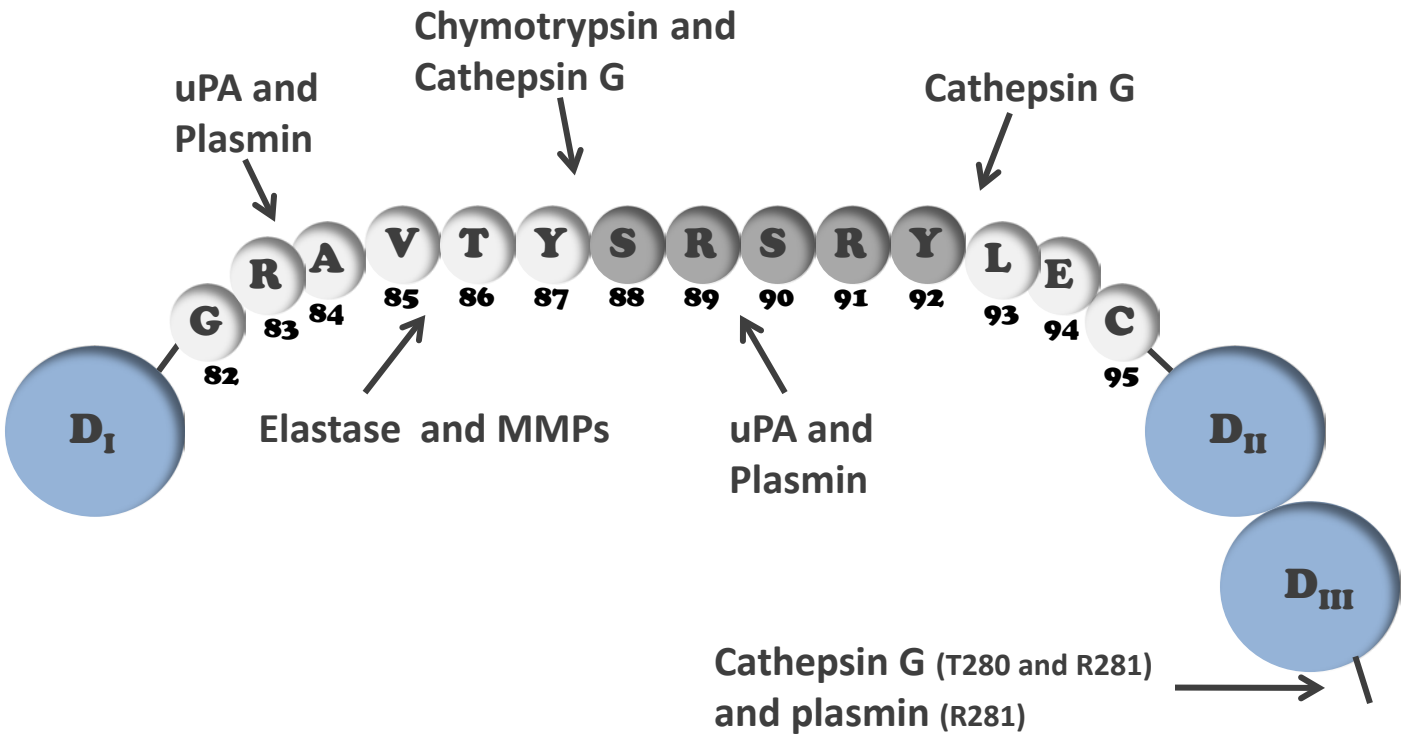
ViroGates A/S, 2009

The structure of suPAR



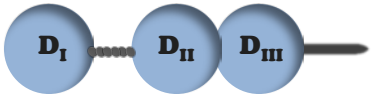
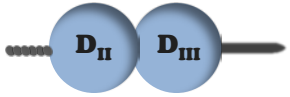
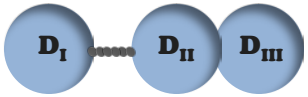
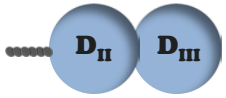
uPAR is located at the cell membrane. When GPI-anchor is cleaved, uPAR will be released from the membrane resulting in the soluble form; suPAR (soluble urokinas plasminogen activating receptor)

The linker region of suPAR

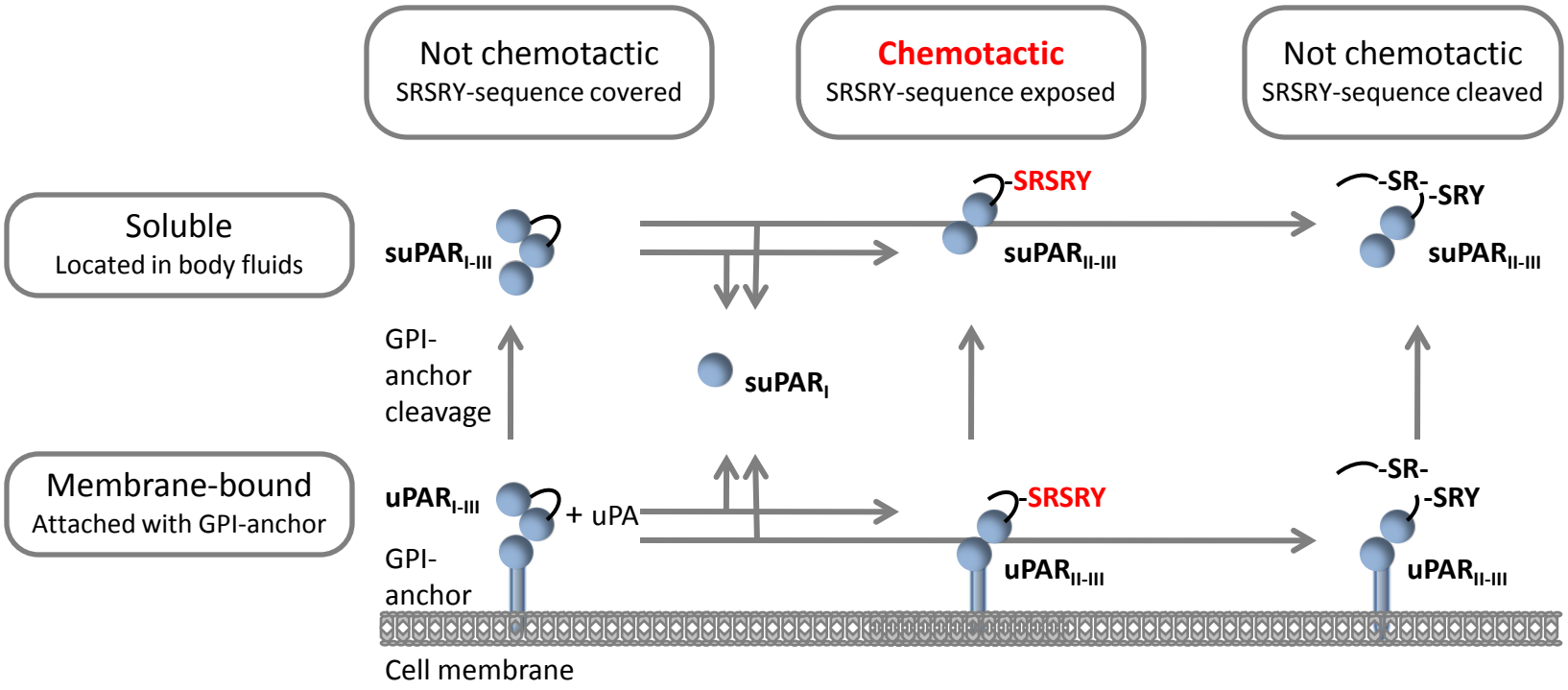


The suPAR molecule consists of three protein domains; D_I, D_{II}, D_{III}. A linker region connecting D_I and D_{II} is found to be chemotactic , and is therefore an activator of the immune system

The fragments of suPAR

Fragments	Structure	Physical Characteristics	Molecular Mass kDa*	Localization
$uPAR_{I-III}$		Full length + GPI anchor	~55-60 (35) [1][2]	Membrane-bound
$uPAR_{II-III}$		Cleaved + GPI anchor	~45-50 (27)[3]	Membrane-bound
$suPAR_{I-III}$		Full length - GPI anchor	~55-60 (35)[4][5]	Soluble
$suPAR_{II-III}$		Cleaved - GPI anchor	~40-45 (27)[6] [7]	Soluble
$suPAR_I$		Cleaved - GPI anchor	~16 (9)[8]	Soluble
				
*The molecular mass is listed for glycosylated proteins . The molecular mass for non-glycosylated proteins is shown in parenthes .				

The cleavage of suPAR and the molecular properties of the resulting fragments



Cleavage of uPAR and suPAR results in different uPAR and suPAR fragments. Generation of the various fragments can happen through a multi-pathway, and it is still not fully understod what is triggering each of the pathways.

How to measure suPAR?

suPARnostic® assays are applied for the quantitative and semi-quantitative determination of soluble urokinase Plasminogen Activator Receptor (suPAR) in human EDTA plasma and whole blood. suPARnostic® is the first method to assign a reproducible clinical value to the suPAR parameter.