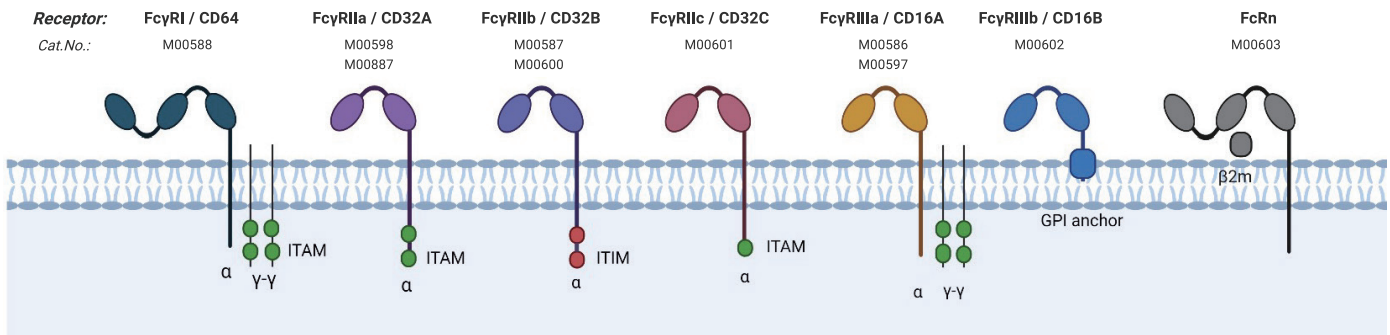


## FcγRs And FcRn Overexpression Cell Line Products For Cell-Based Binding Assay

Leveraging the cell line development capabilities, GenScript has developed single-clone derived CHO-K1 cell lines expressing different classes of Fc gamma receptors (FcγRs) and neonatal Fc receptor (FcRn). The Fc receptor cell line portfolio now includes ten cell lines that express one human FcRn, and six human FcγRs containing polymorphic variants of FcγRIIIa, FcγRIIIa and FcγRIIb.



**Figure 1: Schematic representation of human FcγRs and FcRn on cell surface**

Symbols: α (alpha chain), γ (gamma chain), ITAM (immunoreceptor tyrosine activating motifs), ITIM (immunoreceptor tyrosine inhibitory motif), β2m (β2-microglobulin)

### Highlights



Most complete offering



Single clone



Guaranteed performance



Polymorphic variants

### Applications

- Determination of binding affinity of antibodies or Fc fusion proteins.

- Determination of half-life of antibodies or Fc fusion proteins.

- Determination of mechanism of action of antibodies or Fc fusion proteins *in vitro*.

## Fc-FcγR and Fc-FcRn Binding Affinity Evaluation

During Fc engineering in antibody based drug development, increasing or decreasing Fc-FcγR binding affinity could potentially strengthen or weaken effector functions including ADCC and ADPC. Also, antibody Fc engineering for enhanced Fc-FcRn binding affinity could prolong the circulation half-life of antibody.

GenScript now offers FcγRs and FcRn overexpression cell lines that designed for cell-based binding assay to evaluate Fc-FcγR and Fc-FcRn binding affinity. Moreover, polymorphic FcγRs expressing cell lines are also available from GenScript for performing polymorphism studies.

Receptor	Alias	Polymorphism	IgG subclass binding	Functions
FcγRIIIa	CD16A	V158	Higher affinity to all human IgGs than F158	Activation /Inhibition
		F158	Lower affinity to all human IgGs than V158	Activation /Inhibition
FcγRIIIb	CD16B	-	IgG1, IgG3	Activation
FcγRIIIa	CD32A	H131	IgG1, IgG2, IgG3, IgG4	Activation /Inhibition
		R131	lower affinity to IgG1 and IgG2 than H131, IgG3, IgG4	Activation /Inhibition
FcγRIIb	CD32B	I232	IgG1, IgG2, IgG3, IgG4	Inhibition
		T232	IgG1, IgG2, IgG3, IgG4	Inhibition
FcγRIIc	CD32C	-	IgG1, IgG2, IgG3, IgG4	Activation
FcγRI	CD64	-	IgG1, IgG3, IgG4	Activation
FcRn	FcRn	-	IgG1, IgG2, IgG3, IgG4	Recycling, transport, uptake

## Product List

Cat. No.	Cell Line Products	Gene	Receptor	Alias	Expression Validation
M00597	CHO-K1/CD16A 158V	FCGR3A	FcγRIIIa	CD16A	Validated by Fluorescence Activated Cell Sorting
M00586	CHO-K1/CD16A 158F				
M00602	CHO-K1/CD16B	FCGR3B	FcγRIIIb	CD16B	
M00887	CHO-K1/CD32A 131R	FCGR2A	FcγRIIIa	CD32A	
M00598	CHO-K1/CD32A 131H				
M00587	CHO-K1/CD32B 232I	FCGR2B	FcγRIIb	CD32B	
M00600	CHO-K1/CD32B 232T				
M00601	CHO-K1/CD32C 13Gln	FCGR2C	FcγRIIc	CD32C	
M00588	CHO-K1/CD64	FCGR1	FcγRI	CD64	
M00603	CHO-K1/FcRn	FCGRT	FcRn	-	