

GS Effex[®] Cell Line for Enhanced Antibody Effector Function

Lonza's latest player for the development of antibody immunotherapies. All you love about GS Xceed[®], **now fucose-free!**

Enhancing antibody effector function

The interaction of the IgG antibody Fc region with Fc receptors on immune effector cells engages antibody-dependent cellular cytotoxicity (ADCC) to induce target cell death. Removal of fucose residues on the Fc region has been shown to enhance ADCC, increasing the potency of antibody immunotherapies.

GS Effex[®], derived from Lonza's leading GS Xceed[®] cell line, has been engineered to lack the enzyme responsible for the addition of fucose, α 1,6-fucosyltransferase. This industrially relevant cell line produces antibodies free of fucose (Figure 1), yet retains all of the desirable performance attributes of GS Xceed[®].

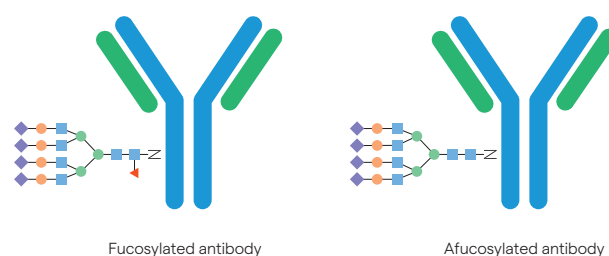
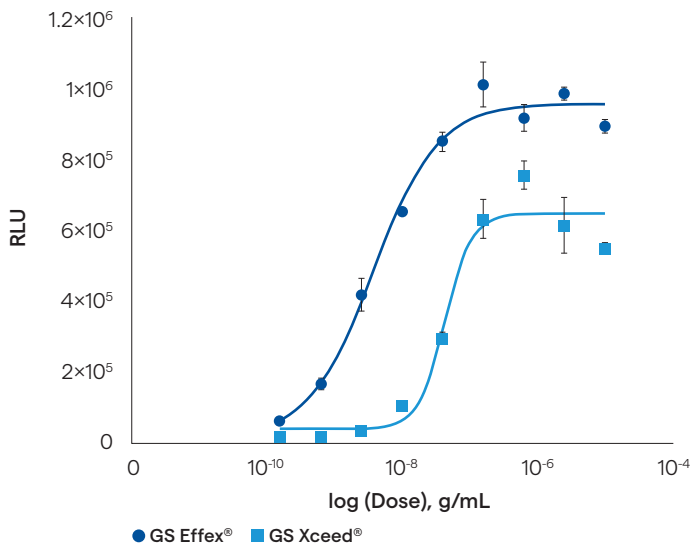


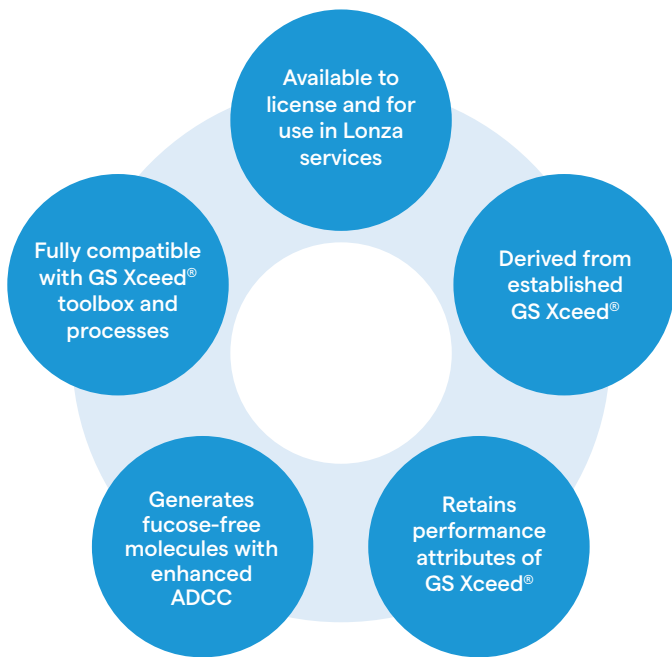
Figure 1. Antibodies produced in GS Effex[®] cell lines are free of fucose residues. Glycan structures are shown on one heavy chain for simplicity.



All you love from GS Xceed[®], now fucose-free!

Lonza’s trusted GS System[®] is built on over 30 years of expertise in bioproduction and has powered more than 75 therapeutics to reach the market. GS Effex[®] produces antibodies that are 100% free of fucose and demonstrate increased potency (Figure 2), without compromising on the titers, growth, stability and product quality that GS Xceed[®] is known for.

Figure 2. Antibodies produced in GS Effex[®] demonstrate enhanced ADCC*.



Plug and play with our Lonza in Your Lab[™] offering

GS Effex[®] is available to take into your lab as part of Lonza’s GS Gene Expression System[®]. The integrated system includes cell lines (GS Xceed[®] and/or GS Effex[®]), GSquad[®] expression vectors, GS piggyBac[®] technology, GS Discovery[®] transient expression system, TheraPRO[®] CHO media system and extensive process know-how. Compatible with standard manufacturing workflows, GS Effex[®] is a plug and play addition to the GS[®] toolbox that is available for licensing and also underpins Lonza’s services offering.

We’ve got your back, with expert technical and regulatory support available to expedite your molecule from discovery through to clinic.

*Lonza internal data determined using an ADCC reporter bioassay for trastuzumab.



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