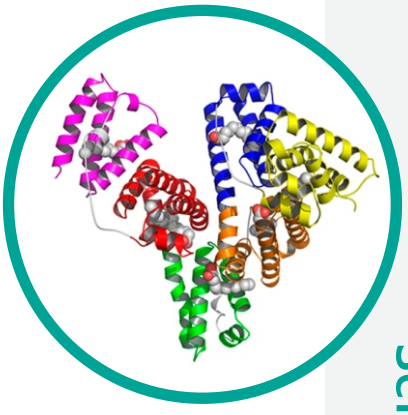
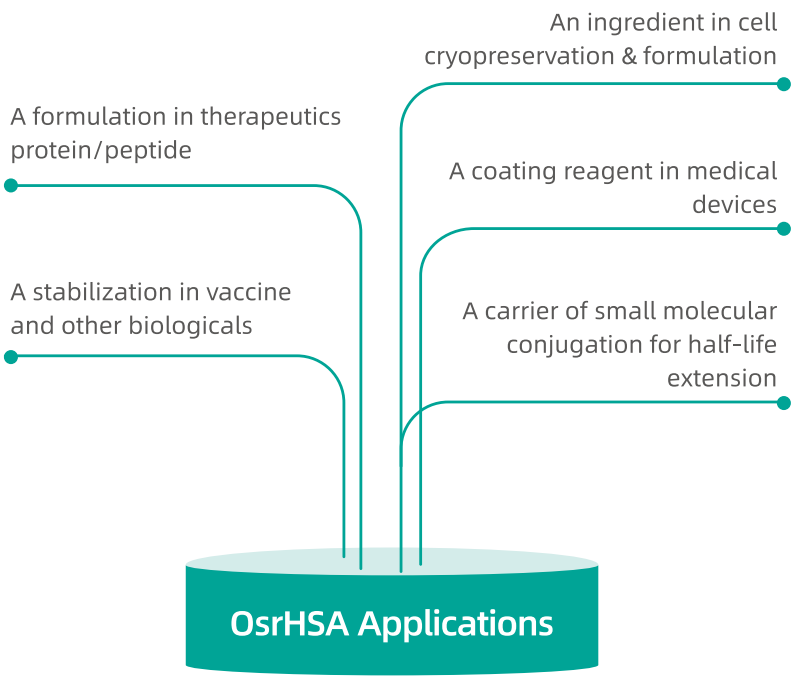
OsrHSA

Recombinant Human Serum Albumin



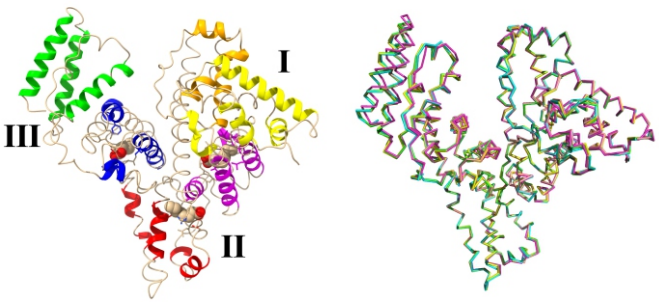
Human serum albumin is the most abundant protein in human plasma. It can transport hormones, lipids and other molecules, buffer pH, and maintain osmotic pressure, among other functions.

OsrHSA, a recombinant human serum albumin derived from rice grains, can provide an excellent solution to utilise a safer, more defined and consistent material. Compared to plasma human serum albumin (pHSA), OsrHSA has the same second and tertiary structure, physiological and biochemical properties with pHSA, while has higher purity and excellent batch consistency.

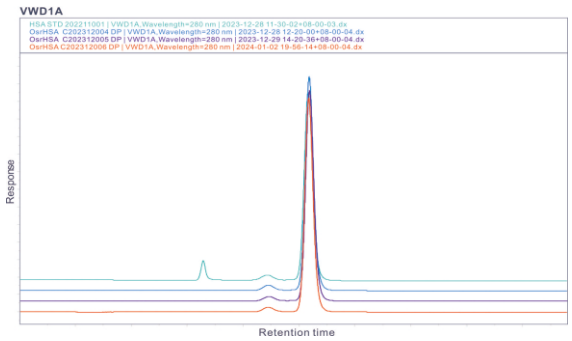


Comparison of physical and chemical properties of OsrHSA and pHSA

Char.	pHSA	OsrHSA
Amino Acids Sequence	Same	
N-terminus	DAHKSEV	DAHKSEV
C-terminus	KLVAASQAALGL	KLVAASQAALGL
Glycosylation	No	
Molecular Mass(MALDI)	66.554KD	66.550KD
PI	4.8	4.8
Drug Binding	Similar	
Thermal Stability	M/P 65℃	M/P 65℃
Lipid Conjugation	Identical	
Crystal Structure	Identical	



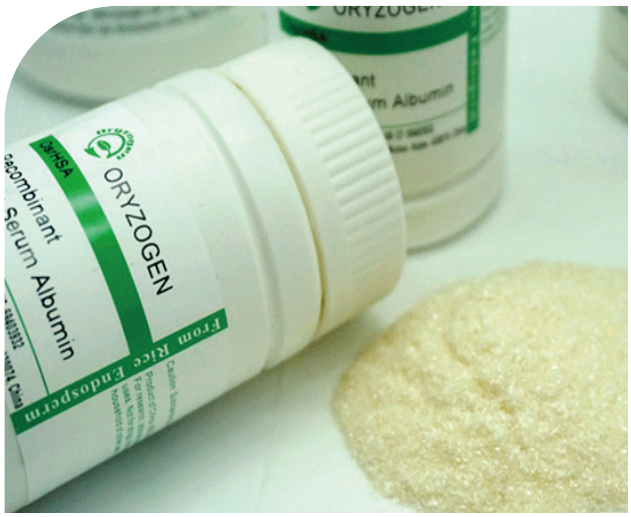
The overall structure of OsrHSA is a heart shape formed by three helical domains, designated I, II, and III, and no obvious differences in main-chain conformations were identified between pHSA and OsrHSA.



SEC-HPLC method was used to detect pHSA in pale blue and OsrHSA in other colors. The OsrHSA spectra of the three batches were highly overlapping, with purity greater than 99%, indicating high consistency between batches.

OsrHSA is offering an excellent bioprocessing solution.

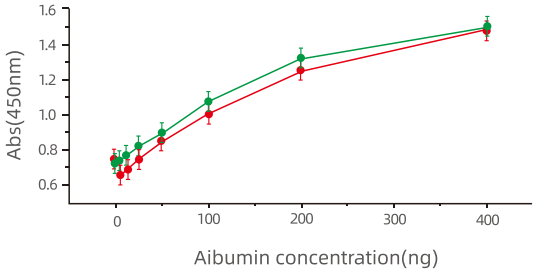
1. Elimination or reduction of the potential risk of viral and other unknown factors in blood derived products.
2. Avoid the serum quality changes from different batches, improve the repeatability and experiment results.
3. Well-defined component.
4. Stable supply and no dependence on a process from precious blood source.
5. Simplify the downstream bio-processing or biological research.



OsrHSA

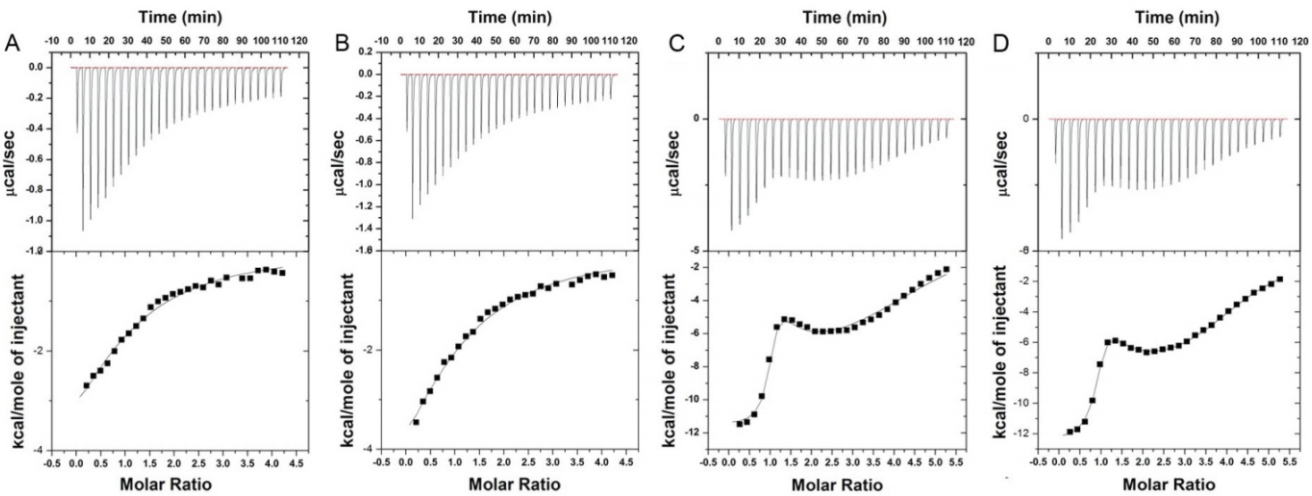
- cGMP compliance
- FDA DMF No. 029648
- Stable and assured long-term supply
- Animal component-free
- Bulk supply from tons capacity manufaturer
- Proven safety by clinical trials
- Expert technical and regulatory support
- Product form: liquid & lyophilized powder

OsrHSA displays the same immunogenicity as pHSA



In ELISA tests, polyclonal antibodies against pHSA reacted equally with OsrHSA, which indicated that the immunogenicity of OsrHSA is similar to that of pHSA *in vitro*.

OsrHSA functions equivalently to pHSA in terms of binding capacity



Two site-specific drug markers, warfarin (site I) and naproxen (site II), were used to evaluate the binding capacity of OsrHSA. The binding assay showed that the affinities of warfarin and naproxen to OsrHSA were simlilar to the binding affinities observed for warfarin and naproxen to pHSA, indicating that no significant difference in drug-binding affinity existsbetween OsrHSA and pHSA.

Using the patented platform-- Oryz^{HiExp}, uses rice endosperm cells as a bioreactor to specifically and highly express various recombinant proteins and small peptides, the OsrHSA was expressed in the rice endosperm and stored in the rice protein body which can keep the protein stability and bioactivity to the maximum extent.

With the world's advanced facility and top production proceeding to extract and purify the OsrHSA, Healthgen Biotech can ensure the excellent consistency of OsrHSA from different batches.

A variety of different grades of OsrHSA for different applications

Item	OsrHSA Premium		OsrHSA Advanced			OsrHSA Precise	
Cat. No.	HYC002C02	HYC002C01	HYC002M01 (Regular)	HYC002M02 (High purity)	HYC002M03 (High stability)	HYC002R01	HYC002R02
Form	Liquid	Lyophilized powder	Lyophilized powder	Lyophilized powder	Lyophilized powder	Lyophilized powder	Lyophilized powder
Purity	NLT 99.0%	NLT 99.0%	NLT 99.0%	NLT 99.0%	NLT 99.0%	NLT 90.0%	NLT 90.0%
Endotoxin	< 1.67EU/ml	< 0.01EU/mg	< 0.125EU/mg	< 0.125EU/mg	< 0.125EU/mg	/	< 5.0EU/mg
Package	50ml, 20%/10g	1g, 10g, 100g	1g, 10g, 50g, 100g, 1kg			1g, 10g, 50g, 100g, 1kg	

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Wuhan Healthgen Biotechnology Corp. (Healthgen Biotech) is focusing on developing, manufacturing and marketing a series of high quality, consistent, animal-free and cost-effective products by using the State-of-the-Art platform called Oryz^{HiExp}, having high capacity to express proteins or small peptides in the rice grain.