

**"Milk-Exo"**

# Milk-Exo

**INCI Name : Milk Exosomes**

**Effectiveness : Anti-inflammatory,  
Whitening, Antioxidant**



## Milk-Exo: A Comprehensive Nutrient Source

- Rich in 114 nutrients: carbohydrates, proteins, fats, calcium, and minerals.
- Historical beauty uses: Cleopatra's milk baths and Poppaea Sabina's milk face washes.
- Benefits for skin: balances moisture and oil, hydrates, exfoliates (AHA), and whitens (niacinamide).

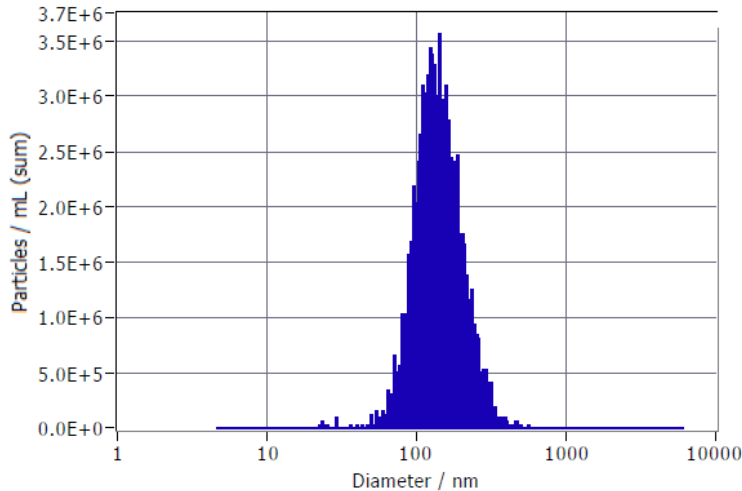


## Milk-Exo

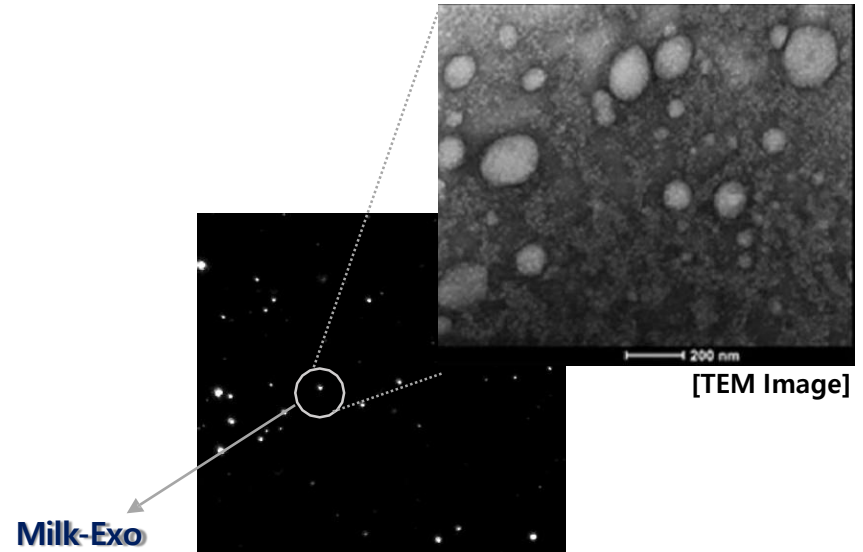
### Result (sizes in nm)

	Number	Concentration	Volume
Median (X50)	136.2	136.2	210.2
StdDev	57.9	57.9	94.8

Concentration:	8.1E+7 Particles / mL
Dilution Factor:	10000
Original Concentration:	8.1E+11 Particles / mL



High-purity exosomes were directly isolated and purified from milk. According to the Nano Particle Tracking Analysis (NTA), the particle size is approximately 136.2 nm.

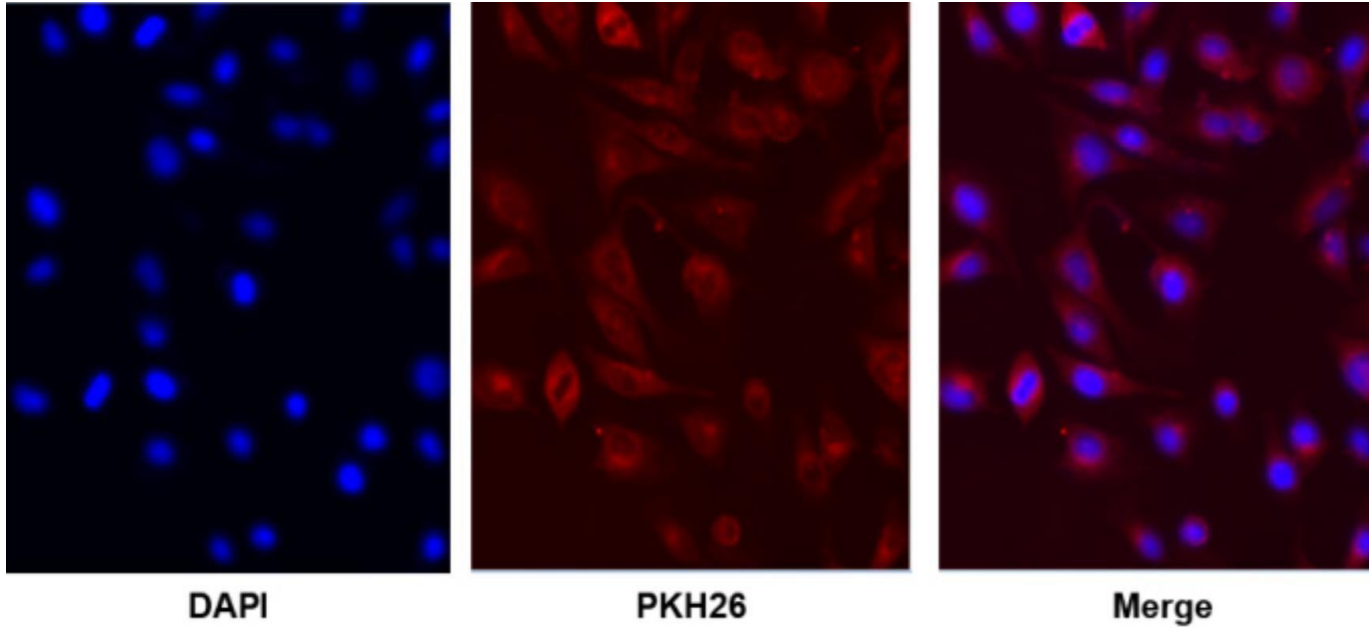


# Efficacy *in vitro*

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## ☑ Confirmation of intracellular absorption of exosomes

# PKH26 : Cell Membrane Labeling Dye, Lipophilic dye

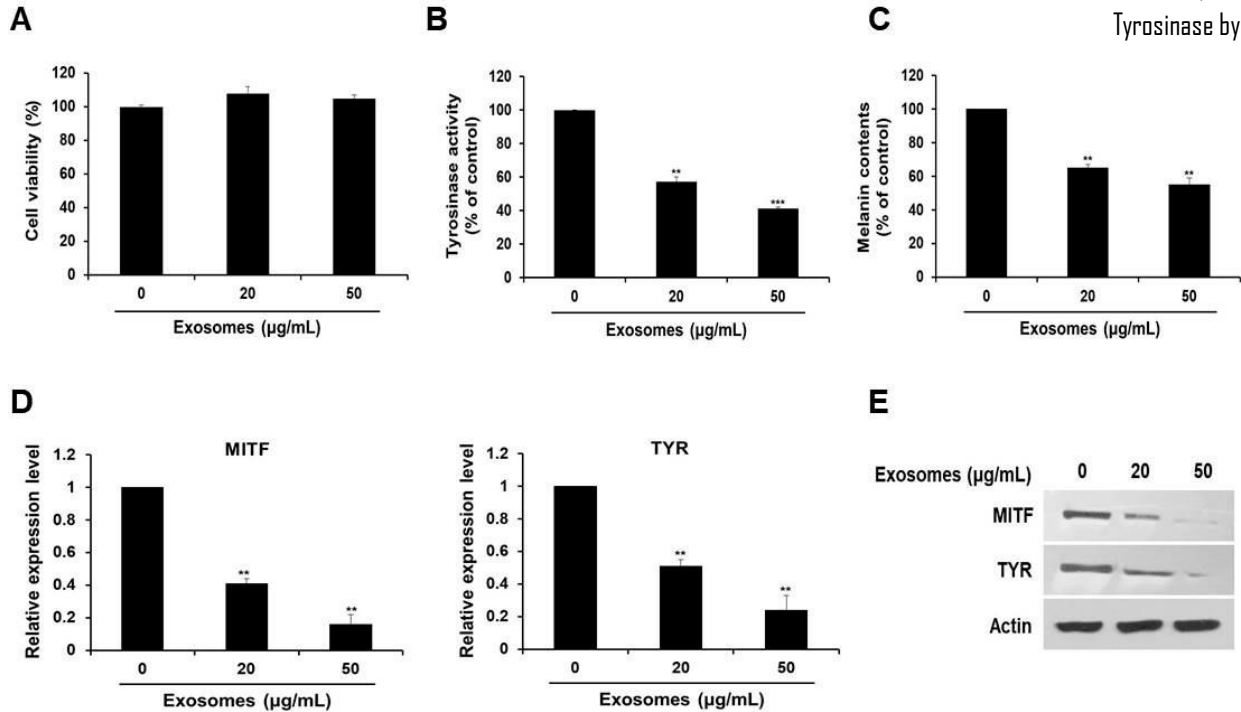


⇒ Confirmation of exosome absorption into cells through PKH26 staining

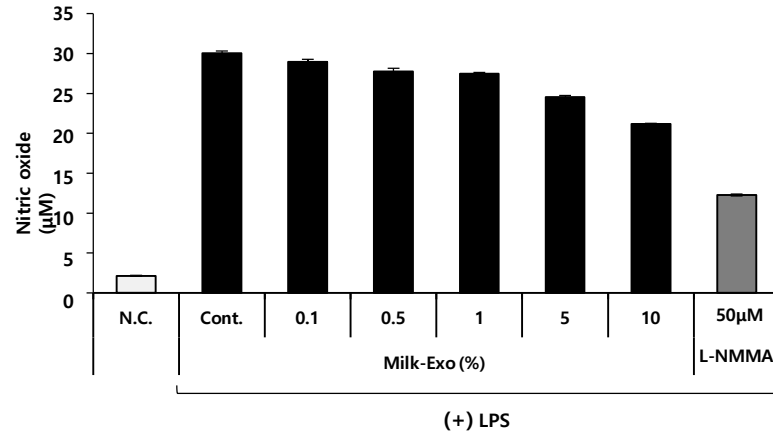
# Efficacy *in vitro*

## ☑ Whitening efficacy

A 55% reduction in extracellular secretion of melanin was observed, with a reduction of melanin-related factors MITF and Tyrosinase by 84% and 76%, respectively.

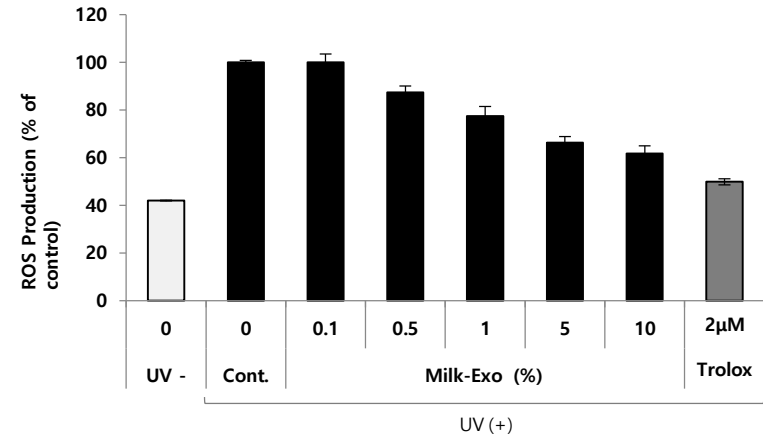


## ☑ Anti-inflammatory activity



At a 10% concentration, the representative inflammation marker Nitric Oxide decreased by 29.54%, indicating expected anti-inflammatory effects.

## ☑ Antioxidant activity



At a 10% concentration, the reactive oxygen species generated by UV decreased by 38.24%, indicating expected antioxidant effects.