

A rising star in Aesthetic Field

PDRN Polydeoxyribonucleotide

Anti-aging & Repair

PDRN (polydeoxyribonucleotide) is a mixture of deoxyribonucleotides derived from a controlled purification process of Salmon Trout or Chum Salmon sperm DNA which makes sure its safety and stability. PDRN activates the adenosine A_{2A} receptors and generates nucleotides that can contribute to DNA formation, thus having a tissue repairing, wound healing and anti-aging effect. Therefore, it is widely used in mesotherapy & dermal fillers.

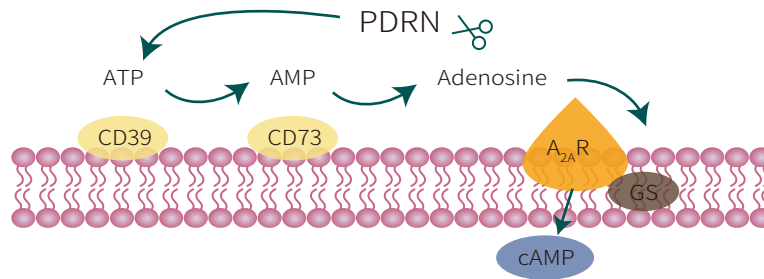
Mechanism of Action

1. Activation of adenosine A_{2A} Receptor

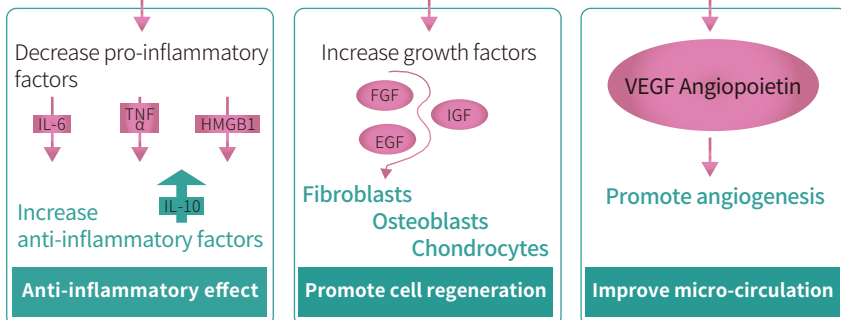
Adenosine activates four distinct adenosine receptors indicated as A_{1} , A_{2A} , A_{2B} , and A_{3} . The A_{2A} receptor plays a central role in modulating inflammation, oxygen consumption, ischemia, cell growth, and angiogenesis. PDRN is able to generate active deoxyribonucleotides, nucleosides, and bases exerting their pharmacological effects and activating the A_{2A} receptor. PDRN interacting with the A_{2A} receptor provides a more complete tissue regeneration and wound healing effect.

2. DNA synthesis salvage pathway:

Cell growth was accompanied by internalization of PDRN-derived nucleotides to offer purine and pyrimidine rings for the "salvage pathway." In fact, damaged or hypoxic tissue very often cannot undergo to the DNA "de novo" synthesis. Under these conditions, salvage pathways operate to recover bases and nucleosides generated from the breakdown of DNA and RNA. The salvaged bases can be then transformed into nucleotides and reincorporated into DNA. PDRN generates nucleotides and nucleosides that can contribute to DNA formation, offering a faster tissue regeneration and wound healing effect.

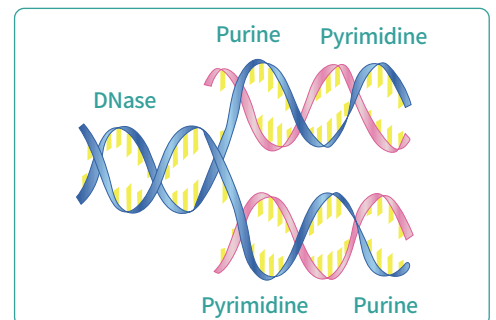


A2 Receptor Activation



More Complete Tissue Regeneration and Wound Healing

Salvage Pathway

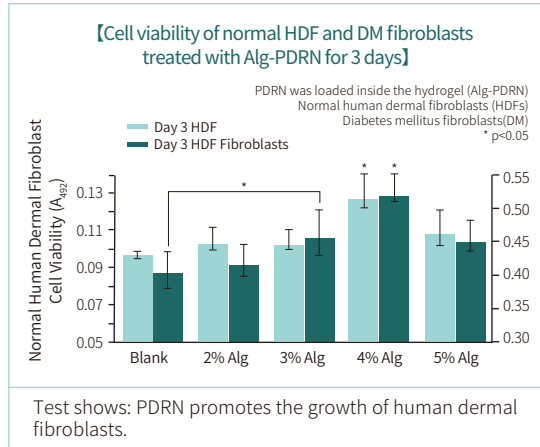


Faster Tissue Regeneration and Wound Healing

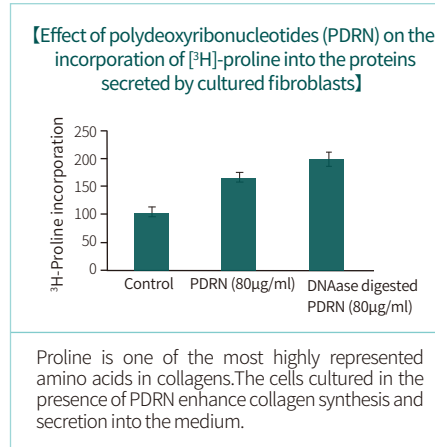
Efficacy experiments

[Anti-aging]

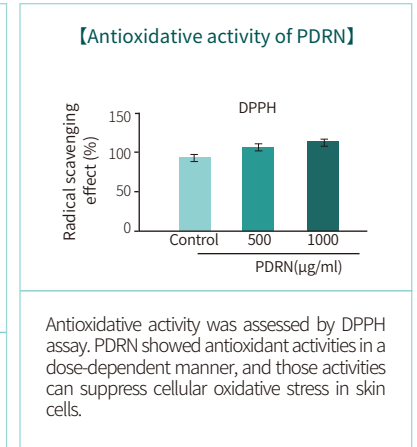
· Cell regeneration



· Collagen regeneration

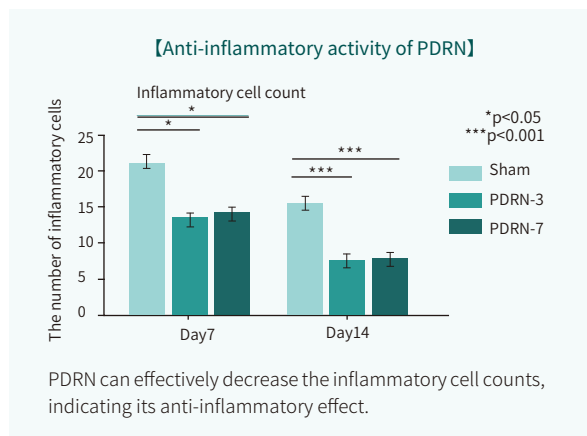


· Anti-Oxidation

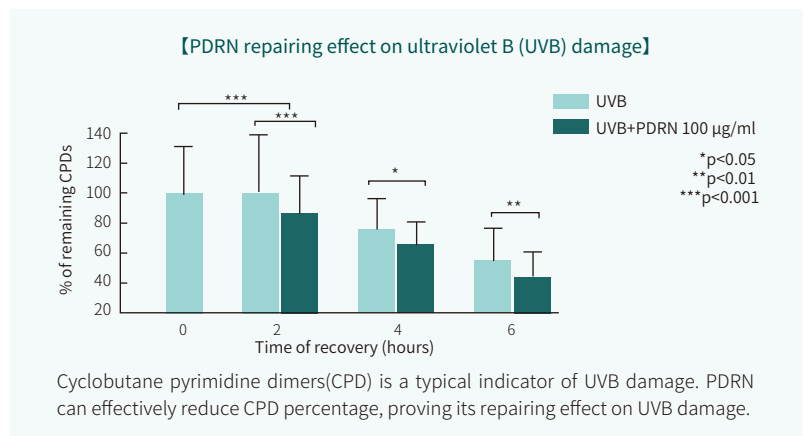


[Repair]

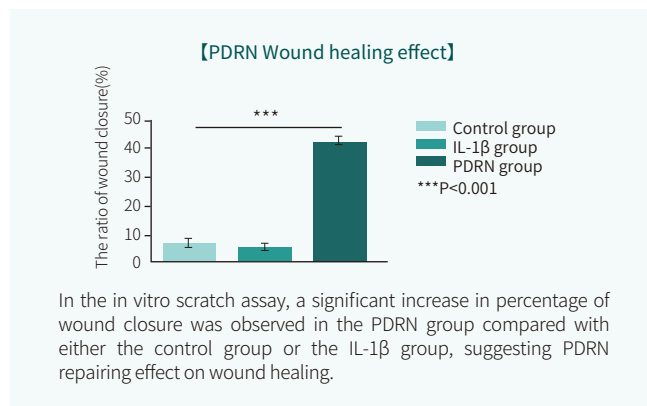
· Anti-inflammation



· Repair of ultraviolet B (UVB) damage



· Wound Healing



Product Information

Product name: Polydeoxyribonucleotide(PDRN)

INCI Name: Sodium DNA

Recommended usage: 0.5%-2%

Applications: Mesotherapy and dermal-fillers

REF:Da YS et al. Scientific Reports, 2020, 10(1).
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