PRODUCT INFORMATION

Pyruvate-Poly-L-Lysine
Ref: PLPYR

Product Description

Form / Colour: lyophilized powder/ pale yellow
Molecular weight: ≃ 15 kDa

Pyruvic acid, as sodium pyruvate, is linked to the amino group of Poly-L-Lysine, as Poly-L-Lysine hydrobromide, using carbodiimide as linker, according to published linkage methods (Geffard et al., 2010).

Pyruvate-Poly-L-Lysine identification is performed by Infra-Red spectroscopy.

Multiple neuroprotective effects of pyruvate after systemic administration have been reported in animal models in the cases of brain injury (Fukushima et al., 2009), ischemia (Kim et al., 2005; Yi et al., 2007), glutamate neurotoxicity (Miao et al., 2011), hemorrhagic shock (Mongan et al., 2003; Su et al., 2013), hydrogen peroxide-induced cell death (Nakamichi et al., 2005), oxygen-glucose deprivation (Ryou et al., 2007), cognitive impairment due to hypoglycemia (Suh et al., 2005), ethanol-induced neurodegeneration (Ullah et al., 2013), and zinc-induced cortical neuronal death (Sheline et al., 2000). Moreover, dietary pyruvate supplementation may prove beneficial against aging-related cognitive impairment and inactivity (Koivisto et al., 2016).

According to published data, the conjugation of lactic acid to Poly-L-lysine may sustain lactic acid in vivo activity (Ali et al., 2004) and should improve lactic acid cellular transport (Ryser and Shen, 1978).

According to published data, the conjugation of pyruvic acid to Poly-L-lysine may sustain pyruvic acid in vivo activity (Ali et al., 2004) and should improve pyruvic acid cellular transport (Ryser and Shen, 1978).

Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions

This product is soluble in water (2 to 4 mg/mL).

Storage/Stability

The product is stable for up to 6 months when stored protected from light, at 2-8°C.

References


