



上海源叶生物科技有限公司
 Shanghai yuanye Bio-Technology Co., Ltd
 电话: 021-61312973 传真: 021-55068248
 网址: www.shyuanye.com
 邮箱: shyysw@sina.com

产品名称: **KX1-004**
 产品别名: **KX1-004**

生物活性:																										
Description	<p>KX1-004 is a potent small molecule inhibitor of Src-PTK as a potential protective drug for NIHL. IC50 value: Target: Src-PTK inhibitor KX1-004, KX1-005 and KX1-174 as potential protective drugs for NIHL. Chinchillas were used as subjects. A 30 microl drop of one of the Src inhibitors was placed on the round window membrane of the anesthetized chinchilla; the vehicle (DMSO and buffered saline) alone was placed on the other ear. After the drug application, the middle ear was sutured and the subjects were exposed to noise. Hearing was measured before and several times after the noise exposure and treatment using evoked responses. At 20 days post-exposure, the animals were anesthetized their cochleae extracted and cochleograms were constructed. All three Src inhibitors provided protection from a 4 h, 4 kHz octave band noise at 106 dB. The most effective drug, KX1-004 was further evaluated by repeating the exposure with different doses, as well as, substituting an impulse noise exposure [1]. LNAC was delivered intraperitoneally at a dose of 325 mg/kg while KX1-004 was administered subcutaneously at a dose of 50 mg/kg. The noise exposure consisted of a 4 kHz octave band of noise at 100 dB SPL for 6 hours/day for 4 days. The drugs were administered once each day, 30 minutes prior to the onset of the noise exposure. The animals' hearing was estimated using the evoked response records from surgically-implanted chronic electrodes in the inferior colliculi. Animals treated with LNAC and KX1-004 had from 10 to 20 dB less temporary threshold shift at day 1 and an average 10 dB less permanent threshold shift by day 21 when compared to control saline treated animals [2].</p>																									
Solvent&Solubility	<p>In Vitro: DMSO : ≥ 42 mg/mL (147.74 mM) * "≥" means soluble, but saturation unknown.</p> <table border="1"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Solvent</th> <th rowspan="2">1 mg</th> <th rowspan="2">5 mg</th> <th rowspan="2">10 mg</th> </tr> <tr> <th>Mass</th> <th>Concentration</th> </tr> </thead> <tbody> <tr> <td>Preparing</td> <td>1 mM</td> <td></td> <td>3.5175 mL</td> <td>17.5877 mL</td> <td>35.1753 mL</td> </tr> <tr> <td rowspan="2">Stock Solutions</td> <td>5 mM</td> <td></td> <td>0.7035 mL</td> <td>3.5175 mL</td> <td>7.0351 mL</td> </tr> <tr> <td>10 mM</td> <td></td> <td>0.3518 mL</td> <td>1.7588 mL</td> <td>3.5175 mL</td> </tr> </tbody> </table> <p>*请根据产品在不同溶剂中的溶解度选择合适的溶剂配制储备液; 一旦配成溶液, 请分装保存, 避免反复冻融造成的产品失效。 储备液的保存方式和期限 -80°C, 6 months; -20°C, 1 month。 -80°C 储存时, 请在 6 个月内使用, -20°C 储存时, 请在 1 个月内使用。</p>		Solvent		1 mg	5 mg	10 mg	Mass	Concentration	Preparing	1 mM		3.5175 mL	17.5877 mL	35.1753 mL	Stock Solutions	5 mM		0.7035 mL	3.5175 mL	7.0351 mL	10 mM		0.3518 mL	1.7588 mL	3.5175 mL
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References	<p>[1]. Harris KC, et al. Prevention of noise-induced hearing loss with Src-PTK inhibitors. Hear Res. 2005 Oct;208(1-2):14-25. [2]. Bielefeld EC, et al. A comparison of the protective effects of systemic administration of a pro-glutathione drug and a Src-PTK inhibitor against noise-induced hearing loss. Noise Health. 2005 Oct-Dec;7(29):24-30.</p>																									