

Morphine (3A6): sc-57915

BACKGROUND

Morphine, the most powerful opiate analgesic drug in opium, acts directly on synapses of the arcuate nuclei within the central nervous system to relieve pain. It is a highly addictive drug, to which tolerance as well as physical and psychological dependences quickly develop. Administered as intravenous, subcutaneous or epidural injections, Morphine creates an profound contraction sensation in the muscles due to histamine release and also produces a "rush" mediated by different receptors in the central nervous system. Morphine is a phenanthrene opioid receptor agonist. By binding to μ opioid receptors within the central nervous system associated with analgesia, sedation, physical dependence and respiratory depression, the euphoric effects of Morphine are quickly followed by withdrawal symptoms.

REFERENCES

1. Sudakov, S.K., Rusakova, I.V., Trigub, M.M., Shakhmatov, V.Y., Kozel', A.I. and Smith, J.E. 2006. Changed Morphine sensitivity of Morphine-dependent rats after laser of the cerebral prefrontal cortex. *Bull. Exp. Biol. Med.* 141: 226-229.
2. Wan, Q., Douglas, S.D., Wang, X., Kolson, D.L., O'Donnell, L.A. and Ho, W.Z. 2006. Morphine upregulates functional expression of neurokinin-1 receptor in neurons. *J. Neurosci. Res.* 84: 1588-1596.
3. Meymandi, M.S., Sepehri, G. and Mobasher, M. 2006. Gabapentin enhances the analgesic response to Morphine in acute model of pain in male rats. *Pharmacol. Biochem. Behav.* 85: 185-189.
4. Misra, N., Prasad, O. and Sinha, L. 2006. Vibrational dynamics of Morphine in relation to Leu5- and Met5-enkephalins. *Indian J. Biochem. Biophys.* 43: 173-181.
5. Jang, S., Kim, H., Kim, D., Jeong, M.W., Ma, T., Kim, S., Ho, I.K. and Oh, S. 2006 Attenuation of Morphine tolerance and withdrawal syndrome by coadministration of nalbuphine. *Arch. Pharm. Res.* 29: 677-684.
6. Bhat, R., Chari, G., Rao, R. and Wirtshafter, D. 2006. Prenatal cocaine and Morphine alter brain cyclin-dependent kinase 5 (Cdk5) activity in rat pups. *Neurotoxicol Teratol.* 28: 625-628.
7. Gallagher, E.J., Esses, D., Lee, C., Lahn, M. and Bijur, P.E. 2006. Randomized clinical trial of Morphine in acute abdominal pain. *Ann. Emerg. Med.* 48: 150-160.
8. Chen, Y.P., Cao, D.Q., Tan, C.H., Xu, J.M. and Chang, Y.T. 2006. Effect of Morphine on dorsal horn projection neurons in neuropathic pain rats. *Zhong Nan Da Xue Xue Bao Yi Xue Ban* 31: 534-537.
9. Pypendop, B.H., Pascoe, P.J. and Ilkiw, J.E. 2006. Effects of epidural administration of Morphine and buprenorphine on the minimum alveolar concentration of isoflurane in cats. *Am. J. Vet. Res.* 67: 1471-1475.

SOURCE

Morphine (3A6) is a mouse monoclonal antibody raised against Morphine conjugated to BSA.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

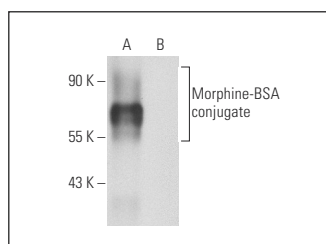
PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Morphine (3A6) is recommended for detection of Morphine by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

DATA



Morphine (3A6): sc-57915. Western blot analysis of Morphine in morphine-BSA conjugate (A) and BSA (B).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.