

Recombinant Mouse Nodal

Cat. No. NODAL-28M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Mouse Nodal(His245Leu354) fused with an Nterminal Met, was expressed in E. coli.
Species	Mouse
Source	E.coli
Description	Nodal is a secreted protein that is a member of the Transforming Growth Factorβ (TGFβ) superfamily. Nodal was named for its localized expression in the mouse node during gastrulation, and is first detected in the early primitive streak during mesoderm formation. Expression of the Nodal gene occurs asymmetrically in the left, but not right, lateral plate during somitogenesis. Nodal proteins play crucial roles in mesoderm formation and both anteriorposterior and leftright axis formation during vertebrate development. Members of the Nodal gene family include mouse Nodal, chick cNR1, frog Xnr14, and zebrafish cyclops. Biologically active Nodal is a disulfide-linked homodimer and contains all seven of the cysteine residues necessary for formation of the "cysteine knot" characteristic of TGFβrelated molecules. Mouse Nodal is 34-39% homologous in the conserved region to other TGFβ superfamily members. Nodal has been shown to signal through a mechanism related to the Activin pathway, and signaling is mediated through both Smad2 and 3.
Endotoxin	<1.0 EU per 1 μ g of the protein by the LAL method.
Predicted MolecularMass	13 kDa (monomer)

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Predicted N terminal	Met
Formulation	Lyophilized from a 0.2 µm filtered solution in Acetonitrile and TFA.
Purity	>97%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Storage	1 year from date of receipt, 20 to 70 °C as supplied. Avoid repeated freeze/thaw cycles.
Official Symbol	Nodal

GENE INFORMATION

Gene Name	Nodal nodal [<i>Mus musculus</i>]
Synonyms	Tg.413d; nodal; transgenic lethal 413.d; early embryo mesoderm formation
Gene ID	18119
mRNA Refseq	NM_013611
Protein Refseq	NP_038639
MIM	97359
UniProt ID	P43021
Chromosome Location	10 B4
Pathway	Developmental Biology; PluriNetWork; Regulation of Signaling by NODAL

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Function

cytokine activity; growth factor activity; protein binding; receptor agonist activity; type I activin receptor binding

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA