

SUPPLEMENTARY MATERIAL

corresponding to:

**Identification and characterization of autophagy-related
genes *Atg12* and *Atg5* from hydra**

NISHIKANT S. DIXIT, BHUPENDRA V. SHRAVAGE* and SURENDRA GHASKADBI*

*Address correspondence to: Surendra Ghaskadbi and Bhupendra Shrivage. Developmental Biology Group, MACS-Agharkar Research Institute, G.G. Agarkar Road, Pune-411 004, India. Tel: +91 20 25325063. Fax: +91 20 25651542. E-mails: smghaskadbi@aripune.org; bhupendra.shrivage@gmail.com
 <http://orcid.org/0000-0002-7367-2049> (Ghaskadbi) and  <http://orcid.org/0000-0002-1329-8884> (Shrivage).

TABLE S1

IDENTITY MATRICES OF MSA OF HYATG12 AND HYATG5 WITH OTHER ANIMALS

A

	CaenorhabditisAtg12	HydraAtg12	CionaAtg12	HumanAtg12	DrosophilaAtg12
CaenorhabditisAtg12	100.00	28.83	41.58	30.70	26.13
HydraAtg12	28.83	100.00	56.44	51.22	49.07
CionaAtg12	41.58	56.44	100.00	51.49	48.51
HumanAtg12	30.70	51.22	51.49	100.00	53.15
DrosophilaAtg12	26.13	49.07	48.51	53.15	100.00

B

	CaenorhabditisAtg5	CionaAtg5	DrosophilaAtg5	HydraAtg5	HumanAtg5
CaenorhabditisAtg5	100.00	33.33	30.80	34.46	35.58
CionaAtg5	33.33	100.00	39.62	40.53	46.77
DrosophilaAtg5	30.80	39.62	100.00	45.25	48.69
HydraAtg5	34.46	40.53	45.25	100.00	55.93
HumanAtg5	35.58	46.77	48.69	55.93	100.00

Identity matrices obtained after MSA of HyAtg12 and HyAtg5 with orthologs in other animals. **(A)** HyAtg12 shows maximum identity with *Ciona* followed by human. **(B)** HyAtg5 shows maximum identity with human followed by *Drosophila*.